



# DAILY NEWS BULLETIN

LEADING HEALTH, POPULATION AND FAMILY WELFARE STORIES OF THE DAY  
Monday 20220517

## Robotic surgery

### **Robotic surgery improves patient recovery time, reduces complications: UK study**

**Patients' physical activity—assessed by daily steps tracked on a wearable smart sensor—stamina and quality of life also increased after robotic surgery (The Tribune: 20220517)**

<https://www.tribuneindia.com/news/health/robotic-surgery-improves-patient-recovery-time-reduces-complications-uk-study-395374>

Robotic surgery improves patient recovery time, reduces complications: UK study  
Photo for representation. — iStock

Robotic surgery may reduce the chance of hospital readmission by over 50 per cent, and prevalence of blood clots by 77 per cent, when compared to patients who undergo an open surgery, according to a study conducted in the UK.

The research, published in the Journal of the American Medical Association (JAMA), also found that patients' physical activity—assessed by daily steps tracked on a wearable smart sensor—stamina and quality of life also increased after a robotic surgery.

The findings provide the strongest evidence so far of the patient benefit of robot-assisted surgery and researchers are now urging National Institute of Clinical Excellence (NICE) to make it available as a clinical option across the UK for all major abdominal surgeries including colorectal, gastro-intestinal, and gynaecological.

“This is an important finding. Time in hospital is reduced and recovery is faster when using this advanced surgery,” said study co-chief investigator James Catto, a professor at the University of Sheffield in the UK.

“Ultimately, this will reduce bed pressures and allow patients to return home more quickly. We see fewer complications from the improved mobility and less time spent in bed,” Catto said in a statement.

Despite robot-assisted surgery becoming more widely available, there has been no significant clinical evaluation of its overall benefit to patients’ recovery.

“In this study we wanted to establish if robot-assisted surgery, when compared to open surgery reduced time spent in hospital, reduced readmissions, and led to better levels of fitness and a quality of life; on all counts this was shown,” said study co-chief investigator, John Kelly, a professor at the University College London (UCL).

“An unexpected finding was the striking reduction in blood clots in patients receiving robotic surgery; this indicates a safe surgery with patients benefiting from far less complications, early mobilisation and a quicker return to normal life,” Kelly said.

Unlike open surgery, where a surgeon works directly on a patient and involves large incisions in the skin and muscle, robot-assisted surgery allows surgeons to guide minimally invasive instruments remotely using a console and aided by three dimensional (3D) view.

However, it is currently only available in a small number of UK hospitals.

Across nine UK hospitals, 338 patients with non-metastatic bladder cancer were randomised into two groups: 169 patients had robot-assisted bladder removal with intracorporeal reconstruction (process of taking section of bowel to make new bladder), and 169 patients had open radical cystectomy.

On average, the robot-assisted group stayed eight days in hospital, compared to 10 days for the open surgery group, a 20 per cent reduction, the researchers said.

Readmittance to hospital within 90 days of surgery was also significantly reduced -- 21 per cent for the robot-assisted group vs 32 per cent for open, they said.

A further 20 secondary outcomes were assessed at 90 days, six- and 12-months post-surgery. These included blood clot prevalence, wound complications, quality of life, disability, stamina, activity levels, and survival.

All secondary outcomes were improved by robot-assisted surgery or, if not improved, almost equal to open surgery, according to the researchers.

This study, and previous studies, show both robot-assisted and open surgery are equally as effective in regards cancer recurrence and length of survival.

Open surgery remains the “gold standard” recommendation for highly complex surgeries, though the research team hopes this could change.

“In light of the positive findings, the perception of open surgery as the gold standard for major surgeries is now being challenged for the first time,” Kelly said.

“We hope that all eligible patients needing major abdominal operations can now be offered the option of having robotic surgery,” he added.

## **Dental Health**

### **Tiny bots can deep clean teeth: Study Often, root canal treatment fails to completely remove all the bacteria which remain hidden inside microscopic canals in the tooth called dentinal tubules (The Tribune: 20220517)**

<https://www.tribuneindia.com/news/health/tiny-bots-can-deep-clean-teeth-study-395370>

Nano-sized robots manipulated with a magnetic field can help kill bacteria deep inside dentinal tubules and boost the success of root canal treatments, says a new study by researchers at the Indian Institute of Science (IISc) and IISc-incubated startup, Theranutilus.

Root canal treatments are routinely carried out to treat tooth infections in millions of patients. The procedure involves removing the infected soft tissue inside the tooth called the pulp, and flushing the tooth with antibiotics or chemicals to kill bacteria that cause the infection.

Often times, the treatment fails to completely remove all the bacteria (especially antibiotic-resistant bacteria such as *Enterococcus faecalis*) which remain hidden inside microscopic canals in the tooth called dentinal tubules.

"The dentinal tubules are very small, and the bacteria reside deep in the tissue. Current techniques are not efficient enough to go all the way inside and kill the bacteria," explains Shanmukh Srinivas, Research Associate at Centre for Nano Science and Engineering (CeNSE), IISc, and co-founder of Theranutilus.

In the study published in *Advanced Healthcare Materials*, the researchers designed helical nanobots made of silicon dioxide coated with iron which can be controlled using a device that generates a low intensity magnetic field. These nanobots were then injected into extracted tooth samples and their movement was tracked with a microscope.

By tweaking the frequency of the magnetic field, the researchers were able to make the nanobots move at will and penetrate deep inside the dentinal tubules. "We have also established that we can retrieve them as they can be pulled back out of the patient's teeth," says Srinivas.

Crucially, the team was able to manipulate the magnetic field to make the surface of the nanobots generate heat, which can kill the bacteria nearby. "No other technology in the market can do this right now," says Debayan Dasgupta, Research Associate at CeNSE, and another co-founder of Theranutilus.

Previously, scientists used ultrasound or laser pulses to create shock waves in the fluid used to flush out bacteria and tissue debris in order to improve the efficiency of root canal treatment.

"But these pulses can only penetrate up to a distance of 800 micrometers, and their energy dissipates fast. The nanobots were able to penetrate much further - up to 2,000 micrometers. Using heat to kill the bacteria also provides a safer alternative to harsh chemicals or antibiotics," the researchers explain.

Theranautilus was spun out of several years of work on magnetically-controlled nanoparticles carried out in the lab of Ambarish Ghosh, Professor at CeNSE.

His group, along with collaborators, have previously shown that such nanoparticles can trap and move objects using light, swim through blood, inside living cells, and stick strongly to cancer cells. "These studies have shown that they are safe to use in biological tissues," says Dasgupta.

The team has tested the dental nanobots in mice models and found them to be safe and effective. They are also working on developing a new kind of medical device that can easily fit inside the mouth, and allow the dentist to inject and manipulate the nanobots inside the teeth during root canal treatment.

"We are very close to deploying this technology in a clinical setting, which was considered futuristic even three years ago," says Ghosh. "It is a joy to see how a simple scientific curiosity is shaping into a medical intervention that can impact millions of people in India alone." IANS

## **Stem cell therapy**

**Stem cell therapy offers a new hope to repair brain damage in newborns  
Stem cells have the ability to turn into many different cells in the body(The  
Tribune: 20220517)**

A few hours after Tom (not his real name) was born, he became restless and did not want to be breastfed. His mother noticed that his left arm and leg were shaking rhythmically – something was not right.

<https://www.tribuneindia.com/news/health/stem-cell-therapy-offers-a-new-hope-to-repair-brain-damage-in-newborns-395350>

Tom was immediately transferred to the neonatal intensive care unit. An MRI scan revealed that he had suffered a severe stroke. Doctors told Tom's parents that there was no treatment they could give the child. He would probably be disabled.

Most people think of stroke as something that mainly affects the elderly, but it can also occur in newborn babies. These "perinatal strokes" happen when one of the major arteries to the brain becomes blocked, leading to a lack of blood supply – and hence oxygen – to certain brain areas. About one in 5,000 newborns have a stroke. It usually happens in the first few days after they are born.

Most of the babies will have problems later in life, with the severity of the problems depending on which brain areas were injured. These problems can include muscle tightness in the arms and legs (cerebral palsy), behaviour problems, learning difficulties and epilepsy.

No therapy exists for newborns with stroke. Researchers, including our own team at University Medical Center Utrecht, have been working on new treatments, one of which involves stem cells.

Stem cells have the ability to turn into many different cells in the body, and they are little factories of several growth factors (proteins that stimulate the growth of specific tissues). The theory is that if we can get stem cells into the damaged part of a baby's brain, the stem cells' growth factors will stimulate the brain to repair itself.

Effective in animals

Earlier studies in animals showed that injecting stem cells into the brains of newborn mice with stroke dramatically reduced the amount of brain damage and disability they suffered. The experiments showed that the treatment was safe and had no side-effects in the mice. These animal studies gave us hope that the treatment would work in newborn babies, too, preventing a lifetime of disability.

But how do you deliver stem cells to a baby's brain without having to use needles or surgery? We decided to try an intranasal route (through the nose), which was tested in mice. After we delivered the stem cells intranasally, the cells travelled rapidly and specifically to the injured brain areas. The injured brain area sends out "alarm signals" which guide the stem cells to the right spot in the brain.

Once the stem cells arrived at the damaged area, they secreted growth factors that boosted the repair systems of the mice's brains. Within a few days, the stem cells were broken down and not traceable in the brain any longer. After several experiments with this method, we concluded that dripping stem cells in the nose is the safest and most efficient way to deliver them to the brain.

Ten babies

After many years of laboratory research, we have finally tested the treatment in babies. The results have been published in *The Lancet Neurology*.

Baby Tom, mentioned earlier, was the first baby to participate in the study and received stem cells within a week of being born. To ask parents to enrol in an experimental therapy in the first week of their newborn child's life is a very delicate process.

After we had a long conversation with his parents, they decided to let their son take part in the study. He received stem cells via nose droplets, a procedure that took only several minutes. Afterwards, Tom was monitored closely for a few days before he went home.

We treated ten newborns who were transferred from hospitals across the Netherlands to the University Medical Center Utrecht after suffering from a stroke. In all ten newborns, the stem

cell droplets were administered without any complications. There was one baby who had a mild fever after the treatment, which quickly cleared up on its own.

A follow-up MRI scan of the brain made three months after the stroke showed less injury than expected, possibly because of the stem cells. At four months, the treated babies, including Tom, performed well when the quality of their movements was tested. When the children are two years old, we will check their development again.

We are now looking for opportunities to proceed with a randomised controlled trial (the gold standard for medical studies) to prove that stem cell therapy can effectively repair brain injury after perinatal stroke.

The discovery of a new and safe therapy with stem cells also opens up opportunities for other babies with brain injury, such as babies who are born too early, or babies that suffer from a lack of oxygen during birth (perinatal asphyxia). Stem cell therapy gives hope to the most vulnerable patient group, with possible lifelong benefits. (The Conversation)

## **Antibiotics**

**Antibiotics may cause deadly fungal infections in hospitalised patients  
Gut microbiomes are generally known to carry genetically encoded  
strategies to survive contact with antibiotics (The Tribune: 20220517)**

<https://www.tribuneindia.com/news/health/antibiotics-may-cause-deadly-fungal-infections-in-hospitalised-patients-395104>

Antibiotics may cause deadly fungal infections in hospitalised patients  
Photo for representation. — iStock

Patients prescribed antibiotics in hospitals to prevent sepsis and other bacterial infections are at increased risk of developing a life-threatening fungal infection called candidiasis because of disruption to the immune system in the gut, a new study warned.

Gut microbiomes are generally known to carry genetically encoded strategies to survive contact with antibiotics.

But the study, led by researchers from the University of Birmingham in the UK and the US National Institutes of Health, discovered that antibiotics disrupt the immune system in the intestines, meaning that fungal infections become poorly controlled in that area.

The team also found that where fungal infections developed, gut bacteria were also able to escape, leading to the additional risk of bacterial infection.

While the study, published in *Cell Host and Microbe*, demonstrated the potential for immune-boosting drugs, the researchers said their work also highlights how antibiotics can have additional effects on our bodies that affect how we fight infection and disease.

This in turn underscores the importance of careful stewardship of available antibiotics.

"We knew that antibiotics make fungal infections worse, but the discovery that bacterial co-infections can also develop through these interactions in the gut was surprising. These factors can add up to a complicated clinical situation - and by understanding these underlying causes, doctors will be better able to treat these patients effectively," said lead author Dr Rebecca Drummond, fungal immunologist at Birmingham.

In the study, the team used mice treated with a broad-spectrum antibiotic cocktail and then infected these animals with *Candida albicans*, the most common fungus that causes invasive candidiasis in humans. They found that although infected mice had increased mortality, this was caused by infection in the intestine, rather than in the kidneys or other organs.

In a further step, the team pinpointed what parts of the immune system were missing from the gut after antibiotic treatment, and then added these back into the mice using immune-boosting drugs similar to those used in humans. They found this approach helped reduce the severity of the fungal infection.

The researchers followed up the experiment by studying hospital records, where they were able to show that similar co-infections might occur in humans after they have been treated with antibiotics.

An estimated 1.2 million people worldwide died in 2019 from antibiotic-resistant infections, and this number is predicted to increase ten-fold by 2050.

The new "findings demonstrate the possible consequences of using antibiotics in patients who are at risk of developing fungal infections," said Dr. Drummond. "If we limit or change how we prescribe antibiotics we can help reduce the number of people who become very ill from these additional infections - as well as tackling the huge and growing problem of antibiotic resistance." IANS

## **Pregnancy**

### **New measure of sperm age may predict pregnancy success**

### **Sperm epigenetic aging is the biological, rather than the chronological, aging of sperm: Study**

**(The Tribune: 20220517)**

<https://www.tribuneindia.com/news/health/new-measure-of-sperm-age-may-predict-pregnancy-success-394840>

A new study suggests that a novel technique to measure the age of male sperm has the potential to predict the success and time it takes to become pregnant.

According to a newly published study by researchers at the Wayne State University, sperm epigenetic aging is the biological, rather than the chronological, aging of sperm.

The study found a 17 per cent lower cumulative probability of pregnancy after 12 months for couples with male partners in older compared to younger sperm epigenetic aging categories.

"Chronological age is a significant determinant of reproductive capacity and success among couples attempting pregnancy, but chronological age does not encapsulate the cumulative genetic and external, environmental conditions, factors, and thus it serves as a proxy measure of the 'true' biological age of cells," said researcher J. Richard Pilsner from the varsity.

"Semen quality outcomes utilising World Health Organisation guidelines have been used to assess male infertility for decades, but they remain poor predictors of reproductive outcomes. Thus, the ability to capture the biological age of sperm may provide a novel platform to better assess the male contribution to reproductive success, especially among infertile couples," Pilsner added.

For the study, published in the journal Human Reproduction, the team involved 379 male partners of couples who discontinued the use of contraception to become pregnant.

The results indicated that higher sperm epigenetic aging is associated with a longer time to become pregnant in couples not assisted by fertility treatment, and among couples that achieved pregnancy, with shorter gestation. IANS

## **National Dengue Day 2022**

**National Dengue Day 2022: Expert shares health, nutrition tips for patients "Visit the nearest hospital when there are any signs of dehydration like less urine output, sunken eyes, lethargy and rapid breathing," Dr Lakshmi Priya said (The Indian Express: 20220517)**

<https://indianexpress.com/article/lifestyle/health/national-dengue-day-2022-health-tips-nutrition-diet-dos-donts-7919358/>

Dengue is a serious health concern in the country (File)

An initiative by the Ministry of Health and Family Welfare, National Dengue Day is observed in the country on May 16, every year. It is "to create awareness about dengue; and to intensify preventive measures and preparedness for the control of disease in the country before transmission season starts," the National Health Portal of India stated.

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Dengue is a serious health concern in the country with over 2361 cases reported this year in Tamil Nadu alone, according to National Center for Vector-Borne Diseases Control. It is followed by Karnataka (1417), Andhra Pradesh (692) and Rajasthan (63). According to Dr Lakshmi Priya, Senior Consultant Microbiologist, Metropolis Healthcare Ltd, tests including “dengue NS1, serological tests and molecular tests” are commonly used to diagnose the condition. Once infected, the symptoms usually begin with sudden onset of fever, followed by severe headache, pain behind the eyes, muscle and joint pain, and rash.

“Dehydration is the most common complication for dengue patients due to fever, vomiting, and reduced oral intake of fluids. Hence rehydration is the first line of management,” said Dr Priya.

dengue, hydration Take plenty of fluids to beat dengue (Source: Getty images/Thinkstock)  
“Visit the nearest hospital when there are any signs of dehydration like less urine output, sunken eyes, lethargy and rapid breathing,” she added.

## **Pressure, expectations and stress**

### **Pressure, expectations and stress: Why millennials are constantly on the brink of burnout**

**Often confused with depression, burnout, in reality, is a condition which results on account of extreme stress that an individual goes through, Kamna Chibber, HOD, Mental Health and Behavioural Sciences, Fortis Memorial Research Institute, Gurugram explained (The Indian Express: 20220517)**

<https://indianexpress.com/article/lifestyle/health/millennials-burnout-stress-work-pressure-expectations-mental-health-7905691/>

Burnout is, more often than not, associated with your work and workplace. (Source: Getty Images/Thinkstock)

American writer-journalist Anne Helen Petersen describes millennials as the “burnout generation”. In her famous book, titled ‘Can’t Even: How Millennials Became the Burnout Generation’, she explores how burnout is rapidly becoming a creeping part of modern culture, shaped by deep-rooted political, historical and economic forces. While Petersen describes the plight of most millennials in America, the situation is no different in other parts of the world, including in India. Millennials and post-millennials, those born after 1981 are constantly exhausted, with burnout becoming a defining feature of their lives.

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“I frequently experience burnout due to the nature of my job,” said a 26-year-old IT professional from Mumbai. Agreed another millennial, who is working as a functional consultant in Bengaluru. Before we delve deeper into the factors leading to burnout and the way out, it’s important to differentiate burnout from other mental health disorders.

What is burnout?

Often confused with depression, burnout, in reality, is a condition which results on account of extreme stress that an individual goes through, Dr Kamna Chhibber, HOD, Mental Health and Behavioural Sciences, Fortis Memorial Research Institute, Gurugram said.

“Due to extended stress, burnout can induce overwhelming sensations of mental and physical tiredness. It can be tough to carry out daily tasks such as employment, caring for others, or juggling various commitments. Depression symptoms, including burnout, might interfere with your daily life,” added Dr Preeti Singh, Senior Consultant, Clinical Psychology, Paras Hospitals, Gurugram.

Burnout could lead to an individual feeling helpless, trapped, defeated, detached, lonely and demotivated (Source: Getty Images/Thinkstock)

Experts explain that burnout can zap the thrill out of one’s career, friendships and family interactions, and reduce the sense of personal accomplishment. “It is different from regular stress in the way that stress is something that would come in our lives and can also be motivating, encouraging you to do well. However, when an individual is experiencing burnout, it is occurring on account of different factors such as – either the roles are unclear, the expectations at work are too much, toxic or difficult relationships at work etc. The balance between work and home is not at its best, in case of burnout. Burnout is more linked to workspace and not about the individual per se,” Dr Chhibber said.

[Stress may be your heart’s worst enemy

Dr Syed Zafar Sultan Rizvi, Assistant Professor, Department of Psychology, SLA, Noida International University, added that this could lead to an individual feeling helpless, trapped, defeated, detached, lonely and demotivated.

What are the symptoms?

In a generation where everyone is constantly rushing to accomplish their goals and finish the assigned tasks, stress and anxiety have become common phenomena. However, if you are experiencing difficulty in concentration, fatigue, tiredness, changes in sleep patterns and appetite along with feelings of helplessness, hopelessness and worthlessness, chances are that you are experiencing burnout.

“Feeling emotionally exhausted, workload, lack of management, poor reward, absence of fairness, community, conflicting values, headaches, biological process complications, muscle tension, high force per unit area, lack of motivation, self-doubt,” Dr Rizvi said, listing some other common symptoms.

Experts attribute this to the constant pressure and burden of expectations that they face. (Source: Getty Images/Thinkstock)

What is leading to burnout among millennials?

While it was the inability to strike a perfect work-life balance leading to burnout for the Mumbai-based IT professional, the 25-year-old professional from Bengaluru said, “For me, burnout happened due to me taking up more work than I could handle and also due to lack of boundaries at workplace, which eventually led to a lot of work pressure. Due to this, I experienced feelings of frustration, a chronic feeling of disengagement and eventually loss of motivation.”

Mental health experts resonate with these thoughts among Millennials and attribute this to the constant pressure and burden of expectations that they face. Dr Chhibber elaborated, “When we look at the current generation, what we need to try and understand is the kind of lifestyle they are living can lead to a lot of pressure. There are a lot of expectations regarding what they want along with the pressure to keep performing well. The competition, which is there within the societies, is also on a very high side. There is always more that needs to be done. Everything is at a very fast pace and this is contributing towards pressure as well because people feel that they need to keep on moving towards something or the other, leaving them with no time for themselves.”

The guilt associated with doing something for themselves is another factor contributing to burnout among millennials. “They struggle to do a lot of things, that they would like to do or would have invested in, because they always feel that if they don’t do a certain activity or a certain task that is expected of them, then people around them would either supersede them or they would not necessarily progress or their trajectory of growth may not be the best at the workspace. This prevents them from being mindful of what they need to do for own selves,” she explained further.

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Dr Singh added that millennials are experiencing higher levels of mental and physical weariness than other age groups. “Burnout can be caused by a variety of factors, including longer work hours, stagnating salary, and rising debt.”

## Burnout and pandemic

Burnout rates increased dramatically during the pandemic for the following reasons, according to Dr Singh – difficulty distinguishing between work and home and having to live on the other side of the world.

Building a solid support system, according to experts, is crucial to figuring a way out of this situation. (Source: Getty Images/Thinkstock)

“Feeling misanthropic and being emotionally exhausted, being less effective on duty, having a deep sense of hysteria regarding the long run and being less willing to accommodate health tips,” are some ways burnout manifested during the pandemic, Dr Rizvi shared.

## The way out

As previously stated, burnout is, more often than not, associated with one’s work and workplace. Thus, it is suggested to “start looking at or reflecting on what is there that you do require to feel more connected to your work. If there are certain things which are not in place, it is important to have those conversations with peers or managers or administration to figure out what could be the best way forward to achieve your goals”, Chhibber said.

According to Dr Singh, “establishing boundaries and learning to say ‘no’ are important things along with practising mindfulness, taking breaks and getting some exercise” to get rid of the feeling of burnout. “Pause. Take a step back and take a break to give much-needed rest to the brain and the body. After this, talking at the workplace and clearly define the boundaries and set up realistic expectations as to how much I can take up work and deliver. Also, saying no to unrealistic deadlines and communicating way ahead. On an everyday basis, taking breaks at regular intervals to ensure my productivity stays at top-notch and I avoid the feeling of burnout,” the 25-year-old professional said, on what helps her cope with burnout.

ALSO READ |Four things millennial men should know about reproductive health

Building a solid support system, according to experts, is crucial to figuring a way out of this situation. Explaining the same, Dr Chhibber added, “If you can have a space where you can go and share your experiences, it would allow you to be able to recognise – firstly, that you may not be the only person who is having difficulties and secondly, that there could be solutions that your mind is not able to come up with because you tend to develop a tunnel vision when you are trying to look at the same problem again and again. So, talking to someone else can bring a sense of perspective and that can be rather helpful.”

## Healthy Teeth

**Find out how you can keep your teeth healthy and protect them from cavities  
People think a few seconds in the morning with an old used brush and a  
dash of some toothpaste is enough to keep their teeth protected, a doctor  
says(The Indian Express: 20220517)**

<https://indianexpress.com/article/lifestyle/health/teeth-healthy-protection-cavities-dental-oral-hygiene-7915643/>

cavities, teeth cavities, cavities in the teeth, oral hygiene, dental health, how to keep teeth healthy, how to prevent cavities, indian express news Treat demineralisation before it becomes a cavity, warns a doctor. (Photo: Getty/Thinkstock)

Instead of going to the dentist for a regular check-up, people often visit them when they have a problem, or when the situation has gone out of hand. While the issue of cavities is common, it is avoidable, and people need to know what they can do in order to maintain dental hygiene and salvage their teeth.

According to Dr Diksha Tahilramani Batra, a pain-free dentist, prosthodontist, implantologist and smile design specialist, oral hygiene is subjective. “It’s amazing to note that we think a few seconds in the morning with an old used brush and a dash of some toothpaste is enough to keep their teeth protected from all the things we subject them to later in the day — from sweets, to smoking and even things that should never make it to our mouth,” she says.

ALSO READ |Dental health: Are you brushing your teeth the right way?

The doctor adds that it is important to remember the mouth is “low maintenance”, but since it is exposed to so much, looking after it is important.

“All it takes is a good hygiene routine with the right tools,” she adds, listing the following:

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- A battery-operated brush
- A toothpaste recommended by your dentist protecting your teeth as well as your gums
- A water flosser that can help you clean the teeth in between
- A tongue cleaner that keeps bacterial concentration low in your mouth

Dr Batra says it is also imperative to have fluoride in your dental products. “Fluoride, although misrepresented sometimes in the media, has definite preventive benefits and is an important component of your dental hygiene products, when used in the right concentration. Be sure to check the contents of your mouthwash and toothpaste to have fluoride that can give you added cavity protection by forming a bacteria-repulsing coating and preserving the calcium in your teeth,” she says.

ALSO READ |Get rid of these habits if you want healthy teeth

Treat demineralisation before it becomes a cavity, she warns, explaining that the tooth enamel is one of the hardest substances in the world, second only to diamonds. “But, it takes a lot of time to burrow through and cavitate it. The formation of cavity happens by a process called demineralisation, which is influenced by the amount of time food lodgement has been present, the bacterial concentration it produces and the acidic byproducts that start leaching the tooth enamel. If this process is caught early on, it can even be reversed and the tooth can be restored without any drilling,” the expert concludes.

## Ayurvedic

**Things to avoid during summers, according to an Ayurvedic expert  
Exposing yourself to the sun in the afternoon can cause “sunstroke, dry skin, burning sensation on skin, headache, dehydration, diarrhoea, etc.”  
(The Indian Express: 20220517)**

<https://indianexpress.com/article/lifestyle/health/things-to-avoid-during-the-summer-season-according-to-an-ayurvedic-expert-7910986/>

summer In the summer, Ayurveda advises making specific lifestyle modifications by avoiding certain things to stay healthy and disease-free. (Source: PTI)

With the temperature hitting the apogee of the thermometer this summer, there are high possibilities of developing diseases, health disorders and seasonal infections as the immunity takes a hit during these months. In this case, it becomes essential to note what we should restrain from doing so as to remain healthy.

In an Instagram post, Ayurveda specialist Dr Dixa Bhavsar outlines in detail what Ayurveda recommends avoiding during the summer to avoid sunstroke and other summer disorders including diarrhoea, hypotension (low blood pressure), dehydration, acidity, headaches, burning sensations, and so on.

According to the expert, drinking water stored in a copper vessel, which is generally considered effective in nature, should be highly avoided during the summers. The reason for the same is that it is heating. “Especially people with acidity, inflammation, migraine, heat issues should avoid it. Opt for water stored in earthen and silver vessels instead,” she added.

#### Consuming curd

Antithetical to what is the larger perception, the expert mentioned that curd is inherently heating. During summers, our digestion is weaker and since curd is difficult to digest, she suggests to opt for better options like buttermilk and lassi.

Also Read | From improving mood to sleep: Here’s why natural sunlight is crucial for you  
Exercising excessively

Exercise, undoubtedly, is primal on a daily basis to stay fit. However, the expert said excessive exercise leads to draining of energy and since the energy level is low due to high temperatures, it should be prohibited.

She wrote, “Excess exertion can lead to dehydration, fatigue & hypotension. So best to avoid excessive exercise and indulge more in calming yoga and pranayamas.”

#### Sun exposure during the day

Daily exposure to sunlight is beneficial- it helps us produce vitamin D, happy hormones, improves our mood and sleep, and regulates our circadian rhythm, among other things. However, exposing yourself to the sun in the afternoon can cause “sunstroke, dry skin, burning sensation on skin, headache, dehydration, diarrhoea, etc,” according to the expert.

“During summers, it’s recommended to get morning sunlight preferably before 8 am and evening sunlight post 5 pm,” she added.

#### Caffeine and carbonated beverages

The expert wrote, “Caffeine creates more heat in the body leading to more inflammation. So instead, it’s recommended to have herbal cooling teas during summers. Carbonated beverages worsen dehydration & makes you feel more thirsty. They also contain sugar which leads to more weight gain (more calories) and lethargy. ”

Natural coolants such as bael sharbat, fennel sharbat, vetiver water, and coriander water are better alternatives that keep us cool and even healthier.

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📣 The above article is for information purposes only and is not intended to be a substitute for professional medical advice. Always seek the guidance of your doctor or other qualified health professional for any questions you may have regarding your health or a medical condition.

## **Anxiety or depression**

**Women of all ages and younger men with anxiety or depression more likely to develop chronic illnesses, research says**

**Even in the three age groups of 20, 40, and 60, women in their 20s, who had both anxiety and depression, were at the highest risk of developing chronic illnesses, with an increased risk of over 61% as compared to participants without either mental disorder. (The Indian Express: 20220517)**

<https://indianexpress.com/article/lifestyle/health/women-all-ages-younger-men-anxiety-depression-higher-risk-chronic-disease-research-7911981/>

anxiety and depressionA study says that a break from social media can help to reduce anxiety and stress.(Source: Pixabay)

A retrospective study titled Association of Depression and Anxiety With the Accumulation of Chronic Conditions, published in the journal JAMA Network Open, found that women of all ages and younger men with anxiety and depression are more likely to develop certain chronic illnesses. The research analysed the health data of 40,360 adults from Olmsted County in Minnesota, from the Rochester Epidemiology Project medical records-linkage system.

ALSO READ | ‘See, absorb, identify, accept it’: Manage anxiety with the ‘3-3-3 rule’

For the research, the participants were split into three age groups of 20, 40, and 60 years old and further divided into four groups of those with anxiety; depression; anxiety and depression;

and, neither anxiety nor depression. Compared to the participants who didn't have either anxiety or depression, women in all three age groups and men in their 20s who had either depression or anxiety and depression were at a much higher risk of developing a chronic condition. In fact, 15 of them, some of which are hypertension, asthma, chronic obstructive pulmonary disease (COPD) and most cancers.

Even in the three age groups, women in their 20s, who had both anxiety and depression, were at the highest risk of developing chronic illnesses, with an increased risk of over 61 per cent as compared to participants without either mental disorder. The least likely were women in their 60s who had anxiety alone. As for the men, those who had anxiety and depression in the age 20 group were most likely to develop a chronic condition, with a nearly 72 per cent risk increase. Whereas, men with anxiety in the age 60 group were least likely with an over 8 per cent decrease in risk.

ALSO READ |Depression may up risk of multiple chronic diseases in women: Study  
Dr Preeti Singh, senior consultant, clinical psychology and psychotherapy and chief medical officer, Lissun, not only concurs with the findings of the study but also said that the reverse is also true: "There is enough research to tell us that when a patient who is having a mental health condition will take longer to recover from a physical ailment until and unless the underlying mental health issue is treated or cured. The vice versa is also true. Any man or woman, diagnosed with a chronic condition will also be at a higher risk for developing mental health conditions because the chronic physical condition entails a lot of transformations and changes in terms of quality of life and lifestyle- from impacting their work, to relationships and of course, the treatment itself. Many times, (in cases like cancer or chronic kidney conditions)the treatment is invasive intrusive, intense and frequent."

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"All this creates dissonance and stress for the patient. As a result, they get into isolation, are withdrawn and don't reach out for help. The shock of a chronic disease itself could be life-threatening. Besides, the feelings of denial and hopelessness are natural reactions in the beginning," she added.

## **Toxoplasma parasite**

**One in three people are infected with Toxoplasma parasite – and the clue could be in our eyes**

**Toxoplasma gondii is probably the most successful parasite in the world today. This microscopic creature is capable of infecting any mammal or bird, and people across all continents are infected. (The Indian Express: 20220517)**

<https://indianexpress.com/article/lifestyle/health/one-in-three-people-are-infected-with-toxoplasma-parasite-and-the-clue-could-be-in-our-eyes-7915349/>

Toxoplasma gondii is probably the most successful parasite in the world today. This microscopic creature is capable of infecting any mammal or bird, and people across all continents are infected. Once infected, a person carries Toxoplasma for life. So far, we don't have a drug that can eradicate the parasite from the body. And there is no vaccine approved for use in humans.

Across the world, it's estimated 30–50% of people are infected with Toxoplasma – and infections may be increasing in Australia. A survey of studies conducted at blood banks and pregnancy clinics across the country in the 1970s put the infection rate at 30%. However, a recent Western Australian community-based study found 66% of people were infected.

ALSO READ |Pet therapy: How dogs, cats and horses help improve human wellbeing  
The disease caused by this parasite can scar the back of the eye. Our new research looked for signs of disease in otherwise healthy people and found a significant number bore the mark of Toxoplasma.

The cat is the primary host for Toxoplasma. Cats catch the parasite when they eat infected prey. Then, for a couple of weeks, they pass large numbers of parasites in their faeces in a form that can survive for long periods in the environment, even during extreme weather. When the faeces are ingested by livestock while grazing, parasites lodge in the muscle and survive there after the animals are slaughtered for meat. Humans can become infected by eating this meat, or by eating fresh produce or drinking water soiled by cats. It is also possible for a woman infected for the first time during pregnancy to pass the infection to her unborn child.

While infection with Toxoplasma is extremely common, the most important health statistic is the rate of the disease caused by the infection, which is called toxoplasmosis.

toxoplasma Yes, cats do spread Toxoplasma. But they're not solely to blame. (Photo: Unsplash/Daria Shatova)

How it affects the eye

Toxoplasma really likes the retina, the multi-layered nerve tissue that lines the eye and generates vision. Infection can cause recurring attacks of retinal inflammation and permanent retinal scarring. This is known as ocular toxoplasmosis.

Contrary to much that is written about ocular toxoplasmosis, medical research shows this condition usually affects healthy adults. However, in aged persons or people with a weakened immune system, or when contracted during pregnancy, it can be more severe. An attack of active inflammation causes “floaters” and blurred vision. When the inflammation progresses to scarring, there may be permanent loss of vision.

In a study of patients with ocular toxoplasmosis seen at a large ophthalmology clinic, we measured reduced vision to below driving level in more than 50% of eyes, and 25% of eyes were irreversibly blind.

ALSO READ |Expert explains causes of blindness in pets and ways to prevent it  
How many eyes?

Ophthalmologists and optometrists are quite familiar with managing ocular toxoplasmosis. But the extent of the problem is not widely recognised, even by the medical community. The number of Australians with ocular toxoplasmosis had never been measured, until now.

We wanted to investigate the prevalence of ocular toxoplasmosis in Australia, but we knew it would be challenging to get funding for a major survey of this neglected disease. So, we used information collected for a different purpose: as part of the Busselton Healthy Ageing Study, retinal photographs were taken from more than 5,000 baby boomers (born 1946–64) living in Busselton, Western Australia. The photographs were gathered to look for other eye diseases, macular degeneration and glaucoma.

By screening these retinal photographs, we estimated the prevalence of ocular toxoplasmosis at one in 150 Australians. This might seem surprisingly common, but it fits with the way people catch Toxoplasma.

In addition to pet cats, Australia has huge populations of feral cats. And Australia is home to a lot of farmland, including over 50% of the global organic farming area. Most importantly, many Australians like to eat their red meat rare, putting them at real risk.

toxoplasma Toxoplasma really likes the retina at the back of the eye and can leave a scar.  
(Photo: Unsplash/Marc Schulte)  
How the condition is treated

To diagnose ocular toxoplasmosis, a retina examination is necessary, ideally with the pupils dilated. The retinal lesion is easy to spot, because of the way Toxoplasma activates retinal cells to produce certain proteins, and an ophthalmologist or optometrist can immediately recognise the appearance. Often a blood test is also performed to make the diagnosis.

If the condition is mild, the doctor may let the body’s own immune system control the problem, which takes a few months. However, usually a combination of anti-inflammatory and anti-parasitic drugs is prescribed.

## vitamins and supplements

**Can taking vitamins and supplements help you recover from Covid? Despite the large variety of complementary medicines marketed, most clinical trials to date have studied the impact of vitamin D, vitamin C or zinc to reduce the risk of contracting COVID, improve rates of hospitalisation or death. (The Indian Express: 20220517)**

COVID-19 High doses or chronic use of COVID supplements have also been linked with adverse effects (Photo: Getty Images/Thinkstock)

Australia's surge in COVID cases this year has seen many people looking for ways to protect themselves or boost their immunity and recovery. An upswing in sales of dietary supplements has followed.

In Australia, the Therapeutic Goods Administration includes vitamins, minerals, amino acids, enzymes, plant extracts and microbiome supplements under the term "complementary medicine".

The supplement industry's global estimated worth was about US\$170 billion (A\$239 billion) in 2020. Australian complementary medicines revenue was estimated at A\$5.69 billion in 2021 – doubling in size over the past decade. The latest data shows 73% of Australians bought complementary medicines in the previous year, with vitamins featuring in more than half of purchases.

ALSO READ | Survey shows high consumption of vitamin C-rich fruits, zinc supplements during Covid

But how likely are these purchases to be effective in preventing COVID or treating it?

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Fear, avoidance and laboratory studies

Historically, the public has purchased supplements from sources that also provide health-care advice. Lockdowns and blanket health messages about social distancing and personal hygiene have created a new normal. So people are doing more shopping online for supplements and turning to the internet, friends or social media for vitamin recommendations. For some, this has led to an unhealthy fear of COVID (coronaphobia) and negative impacts on daily life.

As with any medicine, consumers should seek information from reliable sources (doctors, pharmacists or evidence-based peer-reviewed articles) about the potential benefits and harms of supplements before purchase. Strong evidence supports vaccination as effective against the acute respiratory symptoms of COVID. Researchers have also looked at whether supplements may prevent or reduce the duration and severity of this viral infection by boosting the immune response.

Deficiencies in essential nutrients that support immune function (vitamin C, vitamin D, zinc and selenium) have been shown to increase susceptibility to infection, including COVID. But there is little evidence supplementation in a healthy person prevents respiratory infections such as COVID. An evidence gap exists between a supplement's action in laboratory or animal studies and findings from well designed and conducted clinical trials.

A pandemic 'infodemic'

Ready access to supplements without a prescription from a myriad of online and shopfront sources and the uncontrolled spread of claims that supplements can prevent or treat COVID symptoms, has created an "infodemic".

ALSO READ |Post Covid-19 care: Nutritional guidelines for those recovering from coronavirus

These claims are fuelled by supplement manufacturers being able to "list" their products on the Australian Register of Therapeutic Goods, with limited evidence of safety or effectiveness. This appearance of official approval tallies with the common misperception that "natural" means "safe".

Supplements can cause harm in the form of adverse effects, drug interactions and expense. They also add to a patient's medication burden, may delay more effective therapy, or give false hope to the vulnerable.

Vitamins A to zinc

The recent COVID A to Z Study illustrates some of the challenges involved.

It was designed to test the effectiveness of high-dose zinc, vitamin C, and a combination of both, to shorten the duration of COVID-related symptoms compared with usual care in adult outpatients with confirmed infection.

These nutrients were chosen because:

- vitamin C studies in mice showed this antioxidant to be essential for antiviral immune responses against the influenza A virus, especially in the early stages of the infection
- deficiency of zinc, an essential trace element, has been associated with increased susceptibility to viral infections.

The authors planned to include 520 patients but the safety monitoring committee recommended the study be stopped early, due to low likelihood of detecting significant outcome differences between the groups. There were also more adverse effects (nausea, diarrhoea, and stomach cramps) reported in the supplement groups than those receiving usual care.

Little evidence of benefits

Despite the large variety of complementary medicines marketed, most clinical trials to date have studied the impact of vitamin D, vitamin C or zinc to reduce the risk of contracting COVID, improve rates of hospitalisation or death.

ALSO READ |Can vitamin A nasal drops help restore Covid loss of smell? Know what experts say

Even with high treatment doses, results have been generally disappointing. Vitamin D, zinc and some probiotics may be beneficial to prevent viral infections. Vitamins D, C, A, zinc, calcium and some probiotics may be beneficial to treat viral infections. But other supplements studied (including copper, magnesium, selenium and echinacea) are unlikely to be beneficial or are not supported by sufficient data.

However, supplements may be beneficial when individuals are unable to achieve a balanced and varied diet.

Potentially harmful

High doses or chronic use of COVID supplements have also been linked with adverse effects: vitamin D with muscle pain and loss of bone mass; vitamin A with elevated liver function tests and blurred vision; vitamin E with bleeding risk; plant extracts, magnesium with gastrointestinal effects; and selenium with hair loss and brittle nails.

So, the evidence is not convincing that taking vitamins and supplements will prevent you catching COVID or help you recover from the infection, unless you have a known nutrient deficiency or a poor diet.

## **Summer-friendly foods'**

**These are the five foods you need to eat while on your menstrual cycle  
Taking to Instagram, nutritionist Nmami Agarwal listed the food items  
that one must add to their diet during periods(The Indian Express:  
20220517)**

<https://indianexpress.com/article/lifestyle/health/foods-eating-healthy-menstrual-cycle-7915347/>

menstrual cycle, menstrual cycle diet, foods to eat during menstrual cycle, healthy eating, dietary changes menstrual cycle, indian express news Find out which foods can make your periods more comfortable. (Photo: Getty/Thinkstock)

The diet you follow during your menstrual cycle and even in the days leading up to them, can decide your overall health. Slight discomfort and pain are normal during periods, but healthy

eating can ensure you have a comfortable experience and your body gets all the nourishment it deserves.

ALSO READ |Beat the heat with these ‘summer-friendly foods’

Taking to Instagram, nutritionist Nmami Agarwal listed the five food items that one must add to their diet during periods; read on.

\* Yoghurt, because it is a great source of calcium and protein. It can relax your muscles and reduce premenstrual syndrome. You can have a glass of buttermilk, or a yoghurt bowl, with nuts and fruits.

\* Nuts and seeds, which are rich in omega-3 fatty acids and proteins. They can help curb your cravings during periods.

## **liver diseases**

### **Doctors educate people on liver diseases at ‘Punarjanma’ in Mysuru (The Hindu: 20220517)**

<https://www.thehindu.com/news/national/karnataka/doctors-educate-people-on-liver-diseases-at-punarjanma-in-mysuru/article65419089.ece>

People who underwent liver transplant share their experiences at awareness event organised in Mysuru; Music composer Arjun Janya calls for organ donation pledges  
About 250 persons turned up for ‘Punarjanma’, a liver disease awareness programme organised in Mysuru, which was addressed by doctors and specialists from a private hospital. People who underwent liver transplant shared their experience after getting a new lease of life.

Noted music director Arjun Janya inaugurated the Punarjanma event.

Among those present were Bharateesha Reddy, Vice-President and Unit Head, Apollo BGS Hospitals, Mysuru; Dr. Rajkumar P Wadhwa, Chief Gastroenterologist and Head of Institute of Gastro Sciences; Dr. Suresh Raghavaiah, Senior Consultant HPB and Multi-Organ Transplant Surgeon; Dr. Nairuthya S., Chief Gastrointestinal Surgeon; Dr. Yashavanth Kumar V., Consultant Hepato-biliary and Liver Transplant Surgeon; and Dr. Arti Behl, Consultant Psychiatrist.

In his address at the Punarjanma event, Mr. Janya called upon the people to follow doctors’ advice and health recommendations, and make use of such programs for taking good care of their health. He encouraged people in the audience to sign up for organ donation for saving lives and making a difference to patients on the waitlist for an organ.

Mr. Reddy spoke about the importance and awareness of liver diseases among the general public, which can go a long way in helping them overcome significant health challenges. He explained how the hospital is transforming the lives of patients with chronic liver diseases

through transplants, giving them hope and a fresh lease of life. He informed that the hospital has performed over 50 liver transplants in the last few years, transforming the lives of patients at the end stage of their lives.

Dr. Wadhwa called upon patients to pay attention to their health, control alcohol intake, cut smoking, maintain ideal body weight, avoid stress and self-medication to protect the vital organ — the liver. He gave valuable insights to patients suffering from acute and chronic liver diseases.

Dr Suresh Raghavaiah presented case studies on organ donation and transplants, and how such patients are leading a normal life after the organ transplant at the Punarjanma event

Dr. Nairuthya S. and Dr. Yashavanth Kumar spoke about the surgical aspects of liver transplants, precautions to be taken and having a balanced life. Dr. Arti Behl touched upon the psychological challenges and overcoming them in alcohol addicts and patients suffering from chronic and acute liver diseases.

People who underwent liver transplant spoke about their experience at Punarjanma, and asked the people suffering end-stage liver diseases not to neglect their problems and consult experts immediately to get a new lease of life and recover faster from life-threatening liver diseases. They expressed their gratitude to the donor families, their kith and kin for coming forward for the noble cause, and appreciated doctors, the hospital staff and the nursing team for their support in their transplant journey.

## **Hepatitis**

### **Madhya Pradesh study finds hepatitis in COVID-19-affected children (The Hindu: 20220517)**

<https://www.thehindu.com/sci-tech/health/madhya-pradesh-study-finds-hepatitis-in-covid-19-affected-children/article65416465.ece>

A health worker administering Covid-19 vaccine to a kid in a private school in Bhopal.  
A health worker administering Covid-19 vaccine to a kid in a private school in Bhopal. | Photo Credit: A.M. Faruqi

Condition is different from the Multisystem Inflammatory Syndrome.

While fresh COVID-19 cases in India continue to be at manageable levels, doctors in India—alongside medical experts globally—grapple with a mysterious spike in unexplained hepatitis in children who've tested positive for COVID-19.

A team of medics from the Bundelkhand Medical College (BMC), Sagar, Madhya Pradesh and the Post Graduate Institute of Medical Research, Chandigarh report that an investigation of 475 children, who tested Covid positive from April-July in 2021, showed 37 (about 8%) with Covid Acquired Hepatitis (CAH). Though sporadic reports from various parts of India have emerged

in the last two years, this is the first systematic investigation to quantify the scale of the syndrome in the country.

10 children had the more serious, rare, but better documented, Multisystem Inflammatory Syndrome in Children (MIS-C), that is marked by inflammation in multiple organs and can kill three in every ten diagnosed children.

In CAH, the symptoms include nausea, loss of appetite, weakness, and mild fever. Inflammation isn't marked, though a high level of liver enzymes, called transaminases, is observed. All of the other typical causes of hepatitis, such as associated viruses, are absent. All of the 37 children recovered "uneventfully", meaning that routine treatment for severe hepatitis such as corticosteroids, rehydration, fever management and vitamins were sufficient for nearly all of them.

"We observed a peculiar rise in hepatitis cases. Usually, the beginning of monsoon marks a rise in hepatitis cases. Last year (2021) we started to see this in April, or summer, in covid positive children who were part of follow-up. Most of them in fact had recovered from their covid," said Sumit Rawat, Associate Professor, Microbiology, BMC, and the corresponding author of the study. "Hepatitis A and E are specific to certain villages or regions, B is present through the year and D is usually from a parent or from a blood transfusion. Last year, following the Delta wave we saw these cases from all over the state, defying the usual histories."

#### ALSO READ

WHO says at least one child has died after increase of acute hepatitis cases in children  
Apart from the usual causative viruses, Mr. Rawat and his colleagues investigated multiple possibilities of the hepatitis occurring due to Epstein Barr virus, auto-immune disorders, and chicken pox virus (varicella). However, he noted, some children seemed to be testing positive when administered "irrelevant tests" such as dengue or varicella zoster. They surmised that the hepatitis was possibly due their immune systems behaving abnormally. "What was common in all children was a very high level of covid-antibodies," he added. Mr. Rawat and his colleagues have reported their findings last week in the pre-print repository, Biorxiv, and await publication in a peer-reviewed journal.

While Mr. Rawat's account of Covid-linked hepatitis in children is the most detailed out of India so far, there are reports from several countries postulating a link.

The WHO said last week that 348 probable cases of "hepatitis of unknown origin" had been identified, and the prime suspect was an adenovirus along with a COVID-19 infection.

#### ALSO READ

Explained | The mysterious hepatitis outbreak among children around the world  
Nearly 20 countries had reported cases though only six countries had reported more than five. Britain tops the list of countries with nearly 160 confirmed cases.

The United States' Centers for Diseases and Control released a nationwide health alert about an increase in hepatitis cases of unknown origin in children, raising concern that it could be due to a COVID-19 infection.

Although the cause of the hepatitis is a mystery, Mr. Rawat says it's only the tip of the iceberg as the numbers reported so far were only in children who were severely ill. Many more with less severe liver damage may have gone undiscovered.

A spurt in hepatitis infections followed a month or two after Covid peaks and Mr. Rawat suspects, though he admits it's only a hunch, that Covid caused the children's immune system to "misfire" and pave the way for other usually innocuous infectious organisms, such as an adenovirus or another "co-factor", to cause hepatitis. "On its own an adenovirus is harmless but in the presence of a disturbed immune system can cause a severe infection." Evidence from the United Kingdom, said Mr. Rawat, suggested that these infections were fewer in vaccinated children and so Covid vaccination could be helpful in young children.

## **Omicron variant**

### **South Africa in new surge of COVID-19 from versions of Omicron variant (The Hindu: 20220517) (The Hindu: 20220517)**

<https://www.thehindu.com/sci-tech/health/south-africa-in-new-surge-of-covid-19-from-versions-of-omicron-variant/article65414166.ece>

A patient undergoes a nasal swab to check for COVID-19 at a testing centre in Soweto, South Africa, on May 11, 2022.

A patient undergoes a nasal swab to check for COVID-19 at a testing centre in Soweto, South Africa, on May 11, 2022. | Photo Credit: AP

Health experts in South Africa say the country is experiencing a surge of new COVID-19 cases driven by two omicron sub-variants

South Africa is experiencing a surge of new COVID-19 cases driven by two omicron sub-variants, according to health experts.

For about three weeks the country has seen increasing numbers of new cases and somewhat higher hospitalizations, but not increases in severe cases and deaths, said Professor Marta Nunes, a researcher at Vaccine and Infectious Diseases Analytics at Chris Hani Baragwanath Hospital in Soweto.

"We're still very early in this increase period, so I don't want to really call it a wave," Nunes said. "We are seeing a slight, a small increase in hospitalizations and really very few deaths."

South Africa's new cases have gone from an average of 300 per day in early April to about 8,000 per day this week. Nunes says the actual number of new cases is probably much higher because the symptoms are mild and many who get sick are not getting tested.

South Africa's new surge is from two variations of omicron, BA.4 and BA.5, which appear to be very much like the original strain of omicron that was first identified in South Africa and Botswana late last year and swept around the globe.

“The majority of new cases are from these two strains. They are still omicron ... but just genomically somewhat different,” said Nunes. The new versions appear to be able to infect people who have immunity from earlier COVID infections and vaccinations but they cause generally mild disease, she said. In South Africa, 45% of adults are fully vaccinated, although about 85% of the population is thought to have some immunity based on past exposure to the virus.

“It looks like the vaccines still protect against severe disease,” Nunes said.

Nunes said that the BA.4 and BA.5 strains of omicron have spread to other countries in southern Africa and a few European countries, but it is too early to tell if they will spread across the globe, as omicron did.

The increase in COVID-19 cases is coming as South Africa is entering the Southern Hemisphere's colder winter months and the country is seeing a rise in cases of flu.

At a COVID testing center in the Chiawelo area of Soweto, many people come in to be tested for COVID, but find out they have flu.

“Now we're in flu season ... so it's flu versus COVID-19,” said Magdeline Matsoso, site manager at the Chiawelo vaccination center. She said people come for testing because they have COVID symptoms.

“When we do the tests, you find that the majority of them, they are negative when it comes to COVID, but they do have flu symptoms,” said Matsoso. “So they get flu treatment and then they go home because the majority is related to flu and not COVID.”

Vuyo Lumkwani was one of those who came to get tested.

“I wasn't feeling well when I woke up this morning. I woke up with body pains, a headache, blocked (nose), feeling dizzy, so I decided to come here,” she said.

“I was terrified about my symptoms because I thought it might be COVID-19, but I told myself that I'd be OK because I have been vaccinated,” said Lumkwani. She said she was relieved to be diagnosed with flu and advised to go home with some medications and rest.

## **hospital facilities under Ayushman Bharat Scheme**

### **Over 3.2 crore given the benefit of hospital facilities under Ayushman Bharat Scheme so far: Health Ministry (The Hindu: 20220517)**

<https://www.thehindu.com/news/national/over-32-crore-given-the-benefit-of-hospital-facilities-under-ayushman-bharat-scheme-so-far-health-ministry/article65410572.ece>

Union Minister for Health & Family Welfare Mansukh Mandaviya addresses at the inauguration of the three-day “Swasthya Chintan Shivir” summit, in New Delhi on May 6, 2022.

Union Minister for Health & Family Welfare Mansukh Mandaviya addresses at the inauguration of the three-day “Swasthya Chintan Shivir” summit, in New Delhi on May 6, 2022. | Photo Credit: PTI

18 crore health cards have been issued under the scheme, said the Ministry  
More than 18 crore health cards have been issued under the Ayushman Bharat- Pradhan Mantri Jan Arogya Yojana (AB-PMJAY) scheme so far and over 3.2 crore people have availed the hospital facilities, the Health Ministry said on Friday.

Earlier this week, the National Health Authority (NHA) under its flagship scheme Ayushman Bharat Digital Mission (ABDM) announced successful integration of additional 13 digital health solutions in the ABDM Sandbox environment in the last three months.

“This takes the tally of ABDM integrated service applications to 40 since the national launch was announced on Sep 27, 2021. The ABDM partners ecosystem now consists of 16 government applications and 24 private sector applications,” said the Ministry.

The integration is a technical collaboration between the ABDM and health tech service providers that will help bridge the existing gap amongst different digital platforms, user applications and stakeholders in the digital health space.

Elaborating on the significance of this partnership, Dr. R.S. Sharma, CEO, NHA, said: “In the last seven months of the launch of ABDM, growing number of popular user applications have integrated with the digital platform. Currently, we have 867 active integrators in the ABDM Sandbox. Out of these, 40 major applications have already completed their integrations and are connecting more users to India’s digital health ecosystem.”

He added that ABDM partners ecosystem has seen enthusiastic participation from the private sector. NHA encourages this collaborative development as we aim to change the way the Indian healthcare industry serves its 1.35 billion people.

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Please write complete sentences. Do not type comments in all capital letters, or in all lower case letters, or using abbreviated text. (example: u cannot substitute for you, d is not 'the', n is not 'and').

## **Hypertension**

### **The India hypertension control initiative (The Hindu: 20220517)**

<https://www.thehindu.com/sci-tech/health/the-india-hypertension-control-initiative/article65407635.ece>

How do States in the country fare on the hypertension spectrum? Which States have a higher percentage of blood pressure?

The story so far: A project called the India Hypertension Control Initiative (IHCI) finds that nearly 23% out of 2.1 million Indians have uncontrolled blood pressure.

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## **Child birth**

### **Aorta clamp to save lives during child birth(The Hindu: 20220517)**

<https://www.thehindu.com/sci-tech/health/kerala-obstetricians-device-saves-mothers-from-bleeding-to-death/article65394616.ece>

‘Paily aorta clamp’, developed by a Kerala obstetrician Dr. V.P. Paily, is providing good results without any incidence of vascular injury at multiple centres in low resource settings.

An aorta clamp developed by an obstetrician in the State to control torrential bleeding during the surgical management of Placenta Accreta Spectrum (PAS), a serious obstetric complication and a significant cause of maternal mortality, has been found to be quite useful in containing blood loss and saving maternal lives, without any incidence of vascular injury.

The “Paily aorta clamp”, developed by V. P. Paily, a senior obstetric consultant and a master trainer for the Kerala Federation of Obstetrics and Gynaecology, is currently being used in multiple centres across the State and a few centres outside Kerala, with good results.

A retrospective study of 33 women with varying grades of PAS, who underwent Caesarean hysterectomies as elective or emergency procedures utilising the Paily aorta clamp, appears in the March 2022 issue of the International Journal of Gynaecology and Obstetrics.

With the rise in Caesarean sections (C-section) across public as well as private sector hospitals, PAS is emerging as a major concern and is a significant cause of maternal mortality and morbidity. A previous C-section scar is the most typical risk factor for PAS as the placenta deeply adheres to the scar tissue and into the uterine wall, sometimes extending to nearby organs, such as the bladder.

This means that the placenta will not eject itself naturally after delivery and any attempts to remove it results in torrential haemorrhage (especially if encountered unexpectedly during delivery). Even when saved, the woman suffers catastrophic morbidity, including loss of uterus, bladder injuries, and fistula formations.

The condition has to be identified early during antenatal ultrasound scans and the woman has to be referred to a tertiary care centre for a planned Caesarean hysterectomy, to be done at 34-25 weeks.

PAS management is thus a nightmare for obstetricians worldwide because, apart from the risk of catastrophic amounts of blood loss, there is also the the high probability of urological injuries and massive transfusion requirements encountered during non-conservative surgery.

In high-resource settings, PAS disorders are managed by multidisciplinary teams of expert gynecological and vascular surgeons, supported by anaesthesiologists, intensivists, radiologists and urologists.

In major tertiary centres, vascular surgeons attempt to reduce bleeding using intravascular balloon occlusion at the lower end of the abdominal aorta or the common iliac arteries.

But the application of the Paily aorta clamp in low resource settings, where the access to unlimited amounts of blood to transfuse and the services of a vascular surgeon might not be available, says Dr. Paily, who has conducted innumerable demonstrations across the State on PAS management using the aorta clamp.

The Paily aorta clamp is an easy aid that the obstetricians themselves can use to control bleeding. It can be applied rapidly, without retroperitoneal dissection to manage bleeding.

“We started promoting this method in 2011-12 and now, all Government Medical Colleges in the State and many private hospitals too are utilizing the same to prevent torrential bleeding in PAS. Many near-miss cases we analysed in our recent maternal near-miss reviews showed that the clamp had been very handy,” he says.

The clamp, once secured, leaves a bloodless field for the surgeon attempting complex pelvic dissection in high-grade PAS. Dr. Paily says that in emergencies involving PAS, the clamp works well as a “rescue intervention” because it can be applied faster than cross-clamping or aortic balloon occlusion.

Of the 33 PAS cases reviewed in the study, none developed any signs of aortic wall rupture and had positive surgical outcomes with no clamp-related adverse events.

Dr. Paily, however, insists that only obstetrician-gynaecologists with reasonable expertise should attempt to manage PAS using the aorta clamp and that the team must have a urologist to repair any inadvertent injuries.

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## Hypertension Dainik Bhaskar: 20220517)

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# भारत Research • वर्ल्ड हाइपरटेंशन डे आज; केंद्रीय स्वास्थ्य मंत्रालय के सर्वे के अनुसार 67% महिलाओं, 53.7% पुरुषों ने कभी ब्लड प्रेशर की जांच नहीं कराई देश में मुस्लिमों को सबसे कम हाइपरटेंशन, सिखों को सबसे ज्यादा: सर्वे

पवन कुमार | नई दिल्ली

देश में विश्व समुदाय के लोग सबसे ज्यादा और मुस्लिम सबसे कम हाइपरटेंशन (डबल रक्तचाप) के शिकार हैं। चिकित्सकों का मानना है- हाइपरटेंशन को बढ़ी वज़ह तनाव है। निशानल फैमिली हेल्थ सर्वे-5 की तज़ाब रिपोर्ट में यह जानकारी सामने आई है। इसके मुताबिक, देश के 24% पुरुष और 21% महिलाएं हाइपरटेंशन को शिकार हैं। इसमें सिख धर्म के सबसे ज्यादा 37%, मुस्लिमों में सबसे कम 3.7% और अन्य धर्म के 30.1%, हिंदू के 24%

लिंग: देश में महिलाओं की तुलना में पुरुषों में हाइपरटेंशन की शिकायत ज्यादा होती है

धर्म	पुरुष	महिला
हिंदू	24.0%	21.0%
मुस्लिम	21.2%	20.7%
ईसाई	29.0%	26.3%
सिख	37.0%	30.8%
बौद्ध	23.7%	22.9%
जैन	30.1%	24.7%
अन्य	23.0%	19.8%

इन बीमारियों का खतरा...

• महिला-पुरुषों के बीच का अंतर देखें तो सिखों में यह सबसे ज्यादा करीब 6% होता है, जबकि मुस्लिमों में सबसे कम 0.5% का ही अंतर है।

राज्य: पंजाब में 37% पुरुष, 31% महिलाएं तनाव में, राजस्थान में यह आंकड़ा 18% ही

राज्य	पुरुष	महिला
पंजाब	37.0%	31.2%
दिल्ली	32.7%	24.1%
उत्तीसप्रदेश	27.7%	25.0%
हरियाणा	25.1%	21.0%
महाराष्ट्र	24.4%	23.1%
राजस्थान	17.9%	15.3%

• पंजाब के बाद तेज़त में सबसे ज्यादा 30.9% महिलाओं में इस रक्तचाप की शिकायत है। इसके अलावा किसी भी राज्य में यह 30% से ऊपर नहीं है।

• बिहार में सबसे ज्यादा 41.6% पुरुष बड़े ब्लड प्रेशर के शिकार हैं। इस मुक़ाबले में पंजाब (37.7%) दूसरे, महाराष्ट्र (33.2%), तेलंगाना (33.1%) चौथे व केरल (32.8%) पाँचवें नंबर पर हैं।

उम्र: 15-19 साल वालों में ब्लड प्रेशर की समस्या कम, 70 से ऊपर वालों को ज्यादा

आयु वर्ग	पुरुष	महिला
15-19	4.6%	3.3%
20-24	8.7%	4.7%
25-29	12.4%	6.7%
30-39	19.3%	12.9%
40-49	28.4%	25.0%
50-54	35.2%	36.0%
55-59	37.8%	40.1%
60-69	43.2%	48.7%
70+	49.4%	56.3%

- सभी आंकड़े प्रतिशत में

• 50 की उम्र पर करने के बाद पुरुषों की तुलना में महिलाओं में हाइपरटेंशन बढ़ने लगता है। 49 वर्ष की उम्र तक पुरुषों में हाइपरटेंशन ज्यादा होता है।

• 30-39 आयु वर्ग में पुरुषों की तुलना में करीब 7% ज्यादा महिलाएं हाइपरटेंशन का शिकार होती हैं, वहीं 70+ में इसके विपरीत होता है।