

Gene therapy for maple syrup urine disease shows promise

The Hindu Bureau

Scientists have created a new gene therapy for a debilitating genetic disorder called maple syrup urine disease (MSUD). The treatment can prevent recurrence of deadly symptoms in a cow-calf born with the disease. Their protocol could one day be translated into a much-needed

therapy for patients with two types of classic MSUD, who currently face limited treatment options. Results were published in *Science Translational Medicine*.

Classic MSUD arises from mutations in the three genes that encode the protein subunits of the branched chain alpha-keto acid dehydrogenase complex (BCKDH). The loss of

this complex prevents the body from properly breaking down several amino acids, eventually leading to neurological symptoms and life-threatening brain damage. To prevent complications, patients must either follow a very strict diet low in protein or receive a liver transplant.

Now, Dr. Jiaming Wang from the University of Mas-

sachusetts Chan Medical School, Worcester, Massachusetts and others present a new gene replacement therapy for two types of classic MSUD that uses an adeno-associated viral vector to deliver functional gene copies of BCKDHA and BCKDHB systemically. The therapy worked as intended in knockout cells and was safe in wild-type

mice, and also prevented death after birth in mice deficient in either BCKDHA or BCKDHB.

The scientists visited a farm where some newborn calves had perished from classic MSUD. They administered a single dose of their gene therapy, modified to carry bovine genes, to the animal. Over the next two years, the calf

grew normally and was eventually able to transition to a normal bovine diet high in protein.

The team plans on further work to characterize the long-term impact of the gene therapy on BCKDH levels in the brain, as well as to determine the treatment's benefits on cognition and behaviour over longer study periods.

SNAPSHOTS



Breast cancer cases predicted to rise over the next 25 years

People in low- and middle-income countries face higher death rates from breast cancer than those in wealthier nations, because of a lack of screening and treatment options. For example, people aged under 50 in low-income countries are four times more likely to die from breast cancer than those in high-income countries, on the basis of 2022 data. Due to increasing life expectancy and changing prevalence of risk, breast cancer cases and deaths are predicted to rise over the next 25 years.

ICMR report links high levels of selenium in wheat to hair loss

The ICMR interim report submitted to the Health Ministry on January 28 found consumption of wheat with high levels of selenium led to 31 times higher selenium in the body causing sudden hair loss

R. Prasad

Three Zika virus cases in Gujarat detected between November 2016 and February 2017 were kept under wraps till WHO announced the outbreak on May 26, 2017; the Health Ministry had informed WHO about the three cases on May 15, 2017. The case of high levels of selenium in wheat distributed by Public Distribution System (PDS) outlets causing increased selenium levels and sudden hair loss in over 300 people in Shegaon taluka in Buldhana district, Maharashtra, seems to be following the same pattern – reluctance of the Health Ministry to keep all the stakeholders informed and make the findings public, and then claim there is no conclusive evidence to link high selenium levels in wheat with sudden hair loss.

Between end-December 2024 and January this year, over 300 cases of sudden hair loss were reported in people living in 18 villages in Shegaon taluka. From January 14-17, a team of scientists from ICMR institutes and AIIMS Delhi visited three villages and collected samples from people affected and unaffected (control) by sudden hair loss. Samples of wheat and rice from affected and unaffected households and from ration shops were collected, as well as water and soil samples. Contrary to claims made by government sources, no other samples of food items were collected for testing by the ICMR-AIIMS team. The samples were sent for testing to ICMR-National Institute for Research in Envi-

Unwillingness to be transparent, a recurring tale

Over 300 people in Shegaon taluka in Buldhana district, Maharashtra, experienced sudden hair loss

1 Scientists from ICMR institutes and AIIMS Delhi visited villages from January 14-17 and collected wheat, rice, water, soil and various human samples

2 ICMR submitted an interim report to the Health Ministry on January 28, nearly a month before PTI published the results of an independent researcher

3 Selenium levels in the blood were about 31 times higher. Hair had high selenium content

4 Selenium in wheat samples collected from ration shops was two-eight times higher

5 Selenium levels in the affected people were three times more than the unaffected individuals from the same household



PHOTO CREDIT: CDC

Selenosis: Intake of excessive selenium leads to a condition called selenosis, which is characterised by sudden hair loss

6 Wheat collected from ration shops and affected households had high levels of selenium, establishing a link between high selenium in wheat and sudden hair loss

7 A 2016 report in an Indian journal found 15 individuals from two families with high to extreme selenium toxicity had high selenium levels. Selenium in wheat was 250 times higher

ronmental Health (NIREH) in Bhopal and AIIMS Delhi.

A PTI report published on February 25 said that very high levels of selenium found in wheat was the reason for the sudden hair loss, based on an independent investigation by Dr. Himmatrao Bawaskar of Bawaskar Hospital and Research Centre in Raigad. The ICMR-AIIMS team found high selenium in blood and hair samples of affected people, and the link between high selenium levels in wheat and hair loss nearly a month before Dr. Bawaskar's investigation revealed them. But the findings of the ICMR-AIIMS team have not been made public till date.

In an interim report submitted to the Health Ministry on January 28, ICMR clearly said that the amount of selenium detected in the blood of affected individuals was about 31 times higher than controls. The selenium content was also high in wheat samples collected

from two ration shops and a few households of affected people. Water samples were tested for nearly two-dozen heavy metals, and all were within permissible limits. Based on these findings, the interim report says that high selenium levels in wheat could have caused sudden hair loss. Intake of excessive selenium through food and/or water leads to a condition called selenosis, which is characterised by hair loss, which is what was seen in people in Shegaon taluka.

Blood samples tested by ICMR-NIREH found that people with sudden hair loss had selenium levels nearly 31 times higher than individuals without hair loss from households with no cases of hair loss in the family. Selenium levels in the affected people were three times more than the unaffected individuals from the same households as the affected people. Blood samples tested by AIIMS Delhi found that the

selenium levels were about 25 times more than the controls, and the selenium levels in hair samples from people with sudden hair loss were also high compared with the control group.

Testing by ICMR-NIREH of wheat samples supplied by two ration shops to the affected people living in two villages had selenium two-eight times higher than normal values. The selenium level in the wheat sample collected from a household where an affected person was living was high and comparable to the selenium levels in wheat available at the ration shop. Compared with households of unaffected individuals, people from affected households consumed wheat and rice supplied by PDS shops. The presence of wheat with high levels of selenium both in the ration shops and in the affected households clearly establishes that wheat distributed by the PDS outlets as the

source of selenium for the affected people.

As per a Letter published in 2016 in the *Indian Journal of Dermatology, Venereology, and Leprology*, a study by the SMS Medical College and Hospital in Jaipur found 15 individuals from two families with high to extreme selenium toxicity. Selenium in wheat samples was 250 times higher. As per a 2004 report in *Down to Earth*, large tracts of agriculture lands in Hoshiarpur and Nawanshahar districts in Punjab are impacted and people in many villages in these districts are affected by selenium toxicity.

Investigations needed

It must be noted that while every family receives PDS wheat, not everyone eats this wheat. Many families have wheat grown in their own field. As a result, the wheat samples collected from houses were not necessarily received from PDS shops. Curiously, people who had sudden hair loss in end-December 2024 had good hair regrowth even though they continued to consume wheat supplied by PDS shops. This suggests that the exposure to high selenium was only for a short time, probably because only a few sacks of wheat had high selenium levels. The cases were reported only from 12-15 villages, again supporting the hypothesis that only a few sacks would have had high selenium. It is therefore necessary to carry out further investigations by testing additional wheat samples from the entire supply chain of PDS to ensure that high selenium wheat is not present in the supply chain.

Study identifies sources of PM2.5 in northern India

The Hindu Bureau

A study published in the journal *Nature Communications* has investigated the sources and health impacts of PM2.5 in Northern India, particularly in the Indo-Gangetic Plain. The study has examined PM2.5 composition and oxidative potential, a key indicator of its health risks, using samples from five sites: urban and roadside locations in Delhi, rural and industrial peripheries, and a suburban site in Kanpur. Addressing local inefficient combustion processes can effectively mitigate particulate matter health exposure in northern India, the study finds.

The study found that although uniformly high particulate matter concentrations were recorded across the entire region, local emission sources and atmospheric processes

dominate particulate matter pollution. "In Delhi, PM2.5 is dominated by ammonium chloride and organic aerosols from vehicular emissions, residential heating, and fossil fuel oxidation," says Dr. Sachchida N. Tripathi, Professor at the Department of Civil Engineering & Department of Sustainable Energy Engineering, IIT Kanpur, and one of the corresponding authors. "Outside Delhi, ammonium sulfate, ammonium nitrate, and biomass-burning-derived organic aerosols are more prominent." The study highlights that PM2.5 oxidative potential is primarily influenced by organic aerosols from incomplete combustion of biomass and fossil fuels, particularly from traffic and residential sources. This trend is observed across all locations, emphasising that inefficient local combustion



Major contributor: Traffic can contribute up to 40% of total organic aerosols at urban roadside. GETTY IMAGES

is a major contributor to PM2.5-related health risks.

Hydrocarbon-like organic aerosols originate from fresh vehicular tail-pipe emissions. The study found that the highest average hydrocarbon-like organic aerosols concentrations (8 micrograms per metre cube) were recorded at the urban roadside site

in Delhi. The hydrocarbon-like organic aerosol concentrations do not show great variations across seasons.

Consistent with previous studies, the current study found that hydrocarbon-like organic aerosols are primarily from traffic and contribute up to 20% of total organic aerosols

mass with higher relative contributions in the warm season. From 20%, the contribution from traffic can increase to 40% at an urban roadside. "In all, hydrocarbon-like organic aerosols constitute 50% of the total fossil (coal, petrol, diesel) organic aerosols," says Dr. Tripathi.

Cow dung combustion during winter for heating and cooking contributes to cold-season primary organic aerosols. The cold-season primary organic aerosols are highly elevated during the night and exhibit spatially homogeneous contribution. Also, concentration of cold-season primary organic aerosols during cold weather is up to 10 times higher than during warmer weather. This is because of increased residential heating or cooking emissions and shallower boundary layer conditions.

Urban oxygenated organic aerosols are affected by both fossil emissions from vehicle exhausts and non-fossil emissions from cooking, and have similar concentration levels across seasons. While hydrocarbon-like organic aerosols and urban oxygenated organic aerosols are especially important inside Delhi, cold-season oxygenated organic aerosol forms outside Delhi, the authors write.

Comparative analysis shows that the oxidative potential of PM2.5 in Indian cities is among the highest globally, exceeding levels in Chinese and European cities by up to five times. "The study provides crucial insights for policymakers to design effective air quality control strategies focused on reducing primary emissions from incomplete combustion," says Dr. Tripathi.



Immunity against H1N1 flu reduces flu severity in ferrets

Pre-existing immunity against seasonal H1N1 flu might help explain why most reported human cases of H5N1 bird flu in the U.S. have not resulted in lethal outcomes, suggests a new study. Pre-existing immunity appeared to influence infection severity in ferrets. Compared to immunologically naïve animals, ferrets with previous infection were protected against severe disease and death caused by H5N1 bird flu strain currently circulating in the U.S. Ferrets without prior immunity had more fatal outcomes.



Extreme heat may speed up aging in older adults: study

A study has revealed a correlation between neighbourhoods with more days of extreme heat and individuals experiencing greater increases in biological age. Researchers examined how biological age changed in more than 3,600 participants aged 56 and older from throughout the U.S. Blood samples taken during the study period were analysed for changes in the way individual genes are turned "off" or "on" by a process called DNA methylation.



Question Corner

Symbiosis

Does anemonefish actively feed its hosts in the wild?

Living symbiotically with sea anemones that shelter them from predators, anemonefish (*Amphiprion clarkii*) drive away organisms that nibble at their hosts. Anemonefish have also shown they will provide their hosts with the food given to them by humans. A new study shows such feeding behaviour does happen in the wild by investigating food provisioning by anemonefish and its effects on the symbiotic relationships. When anemonefish are provided with foods of various sizes and types in the field, they

selectively consume small animal food (krill, clams, squid, and fish) and green macroalgae of small size, while providing larger pieces of animal food to their hosts. Food provisioning positively influences the growth of host anemones as growth of anemones directly benefits anemonefish – the number of eggs laid increases when the hosts are larger, and since anemonefish cannot leave their sea anemone, feeding their hosts is extremely important.

Readers may send their questions / answers to questioncorner@thehindu.co.in

FAQ

Has Trump put up entry into the U.S. for sale?

What is the 'gold card' proposal? Will it replace the existing EB-5 visa programme?

Narayan Lakshman

The story so far:
U.S. President Donald Trump recently unveiled plans to sell \$5 million "gold card" resident permits to non-Americans worldwide, a long-term visa policy that might eventually offer a pathway to citizenship for the global economic elite. This new visa will replace the existing EB-5 immigrant investor visa for foreigners who can create jobs in the U.S., the latter an option that Mr. Trump's Commerce Secretary Howard Lutnick has attacked as "full of nonsense, make-believe and fraud."

Why replace the EB-5 visa?

The EB-5 visa was introduced in 1990 with the explicit aim of attracting foreign investors to the U.S. via the residency route, only requiring that they create and support jobs on U.S. soil via direct investment of capital. The investment levels are set at \$8,00,000 in a "Targeted Employment Area", one that faces a certain level of economic distress, and \$10,50,000 outside of such areas. Critics of the EB-5 programme, primarily in the Trump administration, highlight the scope for abuse and fraud within this scheme. While aggregate figures on the scale and frequency of EB-5 fraud and abuse are not available, there is a significant number of documented cases involving misuse of investor funds, for example developers diverting millions

The U.K. and Australia have experimented with similar 'golden visa' initiatives; in both countries it was scrapped 'after interest peaked at a few hundred applications per year'

of dollars intended for projects towards personal use. In terms of governance, the U.S. Congress is responsible for determining citizenship qualifications. In this regard Mr. Trump has reportedly said that Congressional approval may be unnecessary for the "gold card" visa, an approach that might cause consternation on Capitol Hill.

How much revenue will the card raise?

Mr. Trump, while announcing the scheme, expressed hope that "If we sell a million, that's \$5 trillion dollars... I think we will sell a lot because I think there's really a thirst." He also noted that future recipients of the gold visa will be "wealthy and successful and they'll be spending a lot of money and paying a lot of taxes and employing a lot of people." However, close to 75% of billionaires polled by a survey that asked if they would consider this visa indicated that they would not opt for it, primarily because at that level of wealth, they anyway could set up businesses in the U.S. at a lower cost, have options to reside on U.S. soil, and could avoid the U.S. tax net on global income.

Yet there appears to be a lack of clarity on the tax front. While Mr. Trump has said gold card-holders would not be subject to taxes on their overseas income, this would imply that gold card residents will be able to purchase a tax benefit not available to U.S. citizens, effectively creating "dual classes of taxpayers among the American wealthy." That might contravene certain regulations or potentially cause political blowback for the White House if passed into law.

What about other countries?

If we were to compare the experience of other advanced economies, both the U.K. and Australia have experimented with similar "golden visa" initiatives, yet in both countries it was scrapped "after interest peaked at a few hundred applications per year", according to London School of Economics Professor Kristin Surak. Greece, the Netherlands, Spain, and Portugal had similar experiences. Ms. Surak's 2023 book, *The Golden Passport*, examines the global market for citizenship and the wealthy elites who buy their way through it.

The U.K.'s trial of a "gold card" type programme raised another concern – former Home Secretary Suella Braverman said once to the U.K. Parliament that a closer examination of visa grantees indicated that some "were potentially at high risk of having obtained wealth through corruption or other illicit financial activity, and/or being engaged in serious and organised crime." When he was recently asked by media whether Russian oligarchs would be eligible for the card, Mr. Trump said, "Yeah, possibly... I know some Russian oligarchs that are very nice people."

How does this tie in with Trump's immigration paradigm?

The Trump administration is currently in the process of carrying out mass deportations of undocumented migrants in the U.S. Even so, his White House has strongly supported legal migration. Add to this the MAGA focus on gaining transactional advantage through dealmaking with other nations, and the gold visa scheme makes perfect sense as a means to monetise entry into the U.S., while spurring job creation. The test of the success of the programme will depend upon the numbers of those who take up the gold visa offer.

What were the objections to new Advocates Bill?

Why has the Advocates (Amendment) Bill, 2025 been retracted for now? Why is the Bar Council of India peeved with some of the proposed changes? Why are some of the amendments being seen as an effort to undermine judicial independence?

Aaratrika Bhaumik

The story so far:
On February 22, the Centre withdrew the contentious Advocates (Amendment) Bill, 2025, stating that a revised version incorporating public feedback will be introduced. The Bill sought to amend the Advocates Act, 1961. However, its introduction faced strong opposition from sections of the bar. The government's decision to retract the Bill followed a letter from the Bar Council of India (BCI) to Union Law Minister Arjun Ram Meghwal, pointing out that the proposed amendments threatened the "autonomy and independence of the bar."

What is the objective of the Bill?

The Law Ministry underscored the need to amend the 1961 Act to address "contemporary challenges" and align the legal profession with global best practices. It pointed out that seismic shifts in the legal landscape necessitate reforms to better equip lawyers for a rapidly evolving world. The draft Bill comes over a year after the introduction of the Advocates Bill, 2023, which was passed to eliminate "touts" and curb "superfluous enactments" in existing statutes.

Are lawyers allowed to go on strike?

A key point of contention in the Bill is its proposed ban on strikes and boycotts by lawyers, citing their disruptive impact on judicial proceedings. It introduces Section 35-A, explicitly prohibiting advocates and bar associations from abstaining from court work. Violations would constitute "misconduct," subjecting offenders to disciplinary action under the 1961 Act and the Bar Council of India Rules,



In rage: Lawyers stage a protest against the Advocates (Amendment) Bill, 2025, in Ajmer on February 21. ANI

A key point of contention in the Bill is its proposed ban on strikes and boycotts by lawyers

1975. However, the Bill clarifies that the restriction does not apply to strikes that do not "impede the administration of justice" and are intended to address "legitimate concerns about professional conduct," such as working conditions or administrative issues.

Senior advocate Chander Lall underscored that strikes are a legitimate means for lawyers to voice grievances. "The Bill's withdrawal was a direct consequence of protests led by various bar associations. However, court boycotts and strikes inevitably disrupt judicial proceedings, ultimately harming litigants. That said, I believe the bar exercises restraint and resorts to strikes only in cases of extreme exigency," he told *The Hindu*. Echoing similar sentiments, advocate Nipun Saxena pointed out that strikes have historically served as a powerful tool for the legal fraternity to oppose state excesses. "Barrister Dr. Saifuddin Kitchlew was among the earliest vocal opponents of the Rowlatt Act, 1919, which granted the British government sweeping powers to arrest and detain individuals without trial in colonial India. He organised widespread boycotts of British courts by Indian lawyers... Lawyers have long stood as the first line of defence in safeguarding the rule of law and preserving constitutional values," he said.

Is there executive control?

The proposed law allows the Centre to nominate up to three members to the BCI, alongside its existing members – the Attorney General, Solicitor General, and representatives from State Bar Councils. The BCI has strongly opposed this provision, calling it "draconian" and "arbitrarily inserted." The Bill also introduces Section 49B, empowering the Centre to issue binding directions to the BCI, set bar council eligibility criteria, and regulate the BCI's oversight of State bar councils. "Since the government is the largest litigant, it should have no role in an autonomous body like the BCI. Such influence would undermine judicial independence, as advocates serve as officers of the court," Mr. Lal told *The Hindu*.

The amendments significantly expand the BCI's authority, potentially rendering State bar councils redundant. Traditionally, misconduct complaints against advocates are handled by the disciplinary committees of State bar councils. However, Section 45B now allows the BCI to hear complaints nationwide and suspend advocates at its discretion. Additionally, Section 48B empowers the BCI to dissolve a State bar council and replace it with a committee if it deems the council ineffective. Mr. Saxena argued that these changes undermine the federal structure of the 1961 Act. "The BCI and

State bar councils were created under distinct provisions. Stripping State councils of their core functions reduces them to mere administrative bodies with no real authority," he said.

How will it impact corporate lawyers?

The Bill expands the definition of "legal practitioner" under Section 2(i) to include lawyers associated with foreign law firms, corporate entities, and practising advocates. It grants statutory recognition to corporate lawyers working in law firms and as in-house counsel – a long-standing demand that has gained momentum in recent years. Additionally, the Bill empowers the Centre to formulate rules governing the entry of foreign law firms and lawyers into India. "This has faced strong opposition from the BCI.

The Bar Council of India Rules for Registration and Regulation of Foreign Lawyers and Foreign Law Firms in India, 2022, allows foreign lawyers and firms to practise law in India on a reciprocal basis. However, these rules were later challenged before the Delhi High Court, with petitioners arguing that the BCI lacked the statutory mandate to permit such practice. "This proposed change would have had little impact on corporate lawyers in law firms, as most are already licensed advocates. However, its implications are far more significant for in-house counsel. A crucial question is whether this move intends to gradually blur the distinction between 'advocates' and 'legal practitioners'. For instance, would in-house counsel be granted rights of audience before courts, arbitral tribunals, and other judicial fora? Moreover, it could have definitively settled the long-standing debate on whether legal privilege extends to advice provided by in-house counsel to their employers", Mrinal Ojha, partner at Solaris Legal told *The Hindu*. He further pointed out that while the structured entry of foreign law firms into India is a welcome development, the proposed framework remains ambiguous.

"Jurisdictions like Singapore serve as valuable precedents, having successfully balanced the interests of international law firms and the domestic legal fraternity. However, for any regulations introduced by the Centre to be effective, they must be formulated in consultation with all key stakeholders – the BCI, bar associations, and the legal community at large," Mr. Ojha added.

What is the way forward?

"The Bill's withdrawal is a welcome step, and one hopes that inclusive dialogue will lead to meaningful reforms. Any changes must safeguard judicial independence and the autonomy of regulatory bodies," Mr. Lal stated.

Mr. Saxena further underscored the need to consult High Courts before implementing any reforms, noting that Section 34 of the 1961 Act empowers them to regulate the practice of advocates before them and subordinate courts.

Why is India staring at an obesity challenge?

Is there an urban-rural divide? How are prices affecting the right food intake? Why does the rise in obesity have a bearing on non-communicable diseases like diabetes? Why is childhood obesity an area of concern? What is likely to happen in adolescence and adulthood?

Zubeda Hamid

The story so far:
Earlier this week, Prime Minister Narendra Modi, in his 'Mann Ki Baat' radio programme, highlighted the alarming increase in obesity in the country, particularly among children, and noted that obesity affected one in eight Indians. Mr. Modi urged people to reduce oil consumption by 10% each month and stressed that to build a healthy nation, obesity needed to be addressed.

What is the scale of the problem?

Overweight and obesity are defined by the World Health Organization (WHO) as abnormal or excessive fat accumulation that presents a risk to health. Data from the National Family Health Surveys (NFHS) reveals that obesity has been increasing across India over the years. The percentage of women who were overweight/obese grew from 20.6% during NFHS-4 (2015-16) to 24% during NFHS-5 (2019-21). The percentage of overweight/obese men increased from 18.9% to 22.9% during this period. Urban numbers were significantly higher than rural numbers. A 2023 research paper in *The Lancet Regional Health Southeast Asia* that analysed the NFHS-5 data, found the prevalence

While obesity is still primarily an urban, middle class phenomenon in India, it is already rising among the rural poor

of abdominal obesity (assessed through waist circumference) in the country was 40% in women and 12% in men.

Childhood obesity is also an area of concern: the percentage of children under five who were overweight rose from 2.1% to 3.4% from 2015-16 to 2019-21, as per NFHS data. With older children the figures are higher – the World Obesity Atlas 2022 estimates that India will have a child obesity prevalence of 10.81% among 5 to 9-year-olds and 6.23% among 10 to 19-year-olds by 2030.

What are the health risks?

According to the WHO, obesity in adulthood is a major risk factor for the world's leading causes of poor health and early death. These include cardiovascular disease, several common cancers, diabetes and osteoarthritis. India leads the world in the number of people with diabetes at an estimated 101 million. The burden of cancer is on the rise; from 14.6 lakh cancer cases in 2022, the number is projected to go up to 15.7 lakh in 2025, as per the Indian Council of Medical Research-National Cancer Registry Programme. Moreover, cardiovascular disease remains one of the leading causes of death and disability, reportedly affecting Indians at least 10 years earlier than in other countries. In fact, non-communicable diseases (NCDs) now account for about 60% of all deaths in India.

Being overweight in childhood and adolescence, the WHO says, affects children's and adolescents' immediate health and is associated with greater risk and earlier onset of various NCDs. It can also have adverse psychosocial consequences affecting school performance and quality of life, compounded by stigma, discrimination and bullying. Children with obesity are likely to be adults with obesity.

Why is obesity on the rise?

"Rising levels of obesity in urban India are due to a combination of multiple factors: unhealthy diets loaded with ultra-processed foods, lowered levels of physical activity and even air pollution which provokes inflammation that predisposes the body to cardio-metabolic diseases and visceral adiposity in the body," says K. Srinath

Reddy, distinguished professor of public health, Public Health Foundation of India.

Cost is another factor. Low-income households, especially those that depend on the public distribution system, eat more carbohydrates through rice and wheat, says public health professional Vandana Prasad. "You can instruct people to eat better, but it is not possible if these foods are unaffordable. Indian diets, especially among poor families, are deficient in iron and proteins. Foods like fruits, vegetables, pulses, dairy and animal-based foods are all expensive. While at present obesity is still primarily an urban, middle class phenomenon in India, it is already rising among the rural poor, which may soon overtake other segments," she adds.

A study in *The Lancet Global Health* last year said almost half of all Indians are not sufficiently physically active. "Even as indoor sedentariness is increasing due to the seated nature of office work and use of digital devices, outdoor conditions are not conducive to safe and pleasurable physical activity," points out Dr. Reddy. The absence of safe cycling lanes and pedestrian paths are compounded by dimly-lit lanes; green spaces available for recreational physical activity are shrinking while traffic density and rising street crime deter walkers in many urban zones.

Is obesity being measured correctly?

While the usual metric to measure obesity is the Body Mass Index (BMI), there has been a growing debate about its limitations. BMI does not indicate how much of the weight is fat and where the fat is distributed in the body. Fat in the abdomen particularly – something that Indians are genetically predisposed to accumulating – contributes to metabolic syndrome, a group of risk factors that increases the chances of developing type 2 diabetes, stroke and heart disease.

This January, experts in India issued updated guidelines for obesity treatment and diagnosis that placed special emphasis on abdominal fat distribution. The classification introduces two stages in obesity – the first stage where there is increased adiposity without discernible effects on organ functions or daily activities, and the second, where both physical and organ functions are impacted. It recommends the use of waist circumference or waist-to-height ratio and body fat measurements, alongside BMI, to diagnose obesity.



ISTOCKPHOTO

PROFILES

Twisting in the whirlwind

Volodymyr Zelenskyy

The Ukrainian President, who in recent past emerged as the face of his country's resistance against Russia's war, has been left in the cold as the U.S., Kyiv's main backer, has reached out to the Kremlin to bring the war to an end

ILLUSTRATION: SOUMYADIP SINHA



Stanly Johny

“Our two nations are allies in this battle,” Volodymyr Zelenskyy said in his address to the U.S. Congress in December 2022. “We have to defeat the Kremlin... This struggle will define in what world our children and grandchildren will live...”, he said. The Ukrainian President was accorded a hero's welcome in Washington DC, and both Biden administration officials and lawmakers declared their support for Kyiv. Earlier in the year, while addressing the House of Commons in London, Mr. Zelenskyy compared himself to Winston Churchill, the British wartime Prime Minister, without directly mentioning his name. “We will not give up, and we will not lose,” Mr. Zelenskyy said. Many hailed him as a “modern Churchill”. He was the ‘brave face’ of Ukraine's dogged resistance against Russia's “unprovoked” invasion. The U.S. and its European allies said they would support Ukraine “as long as it takes”. Mr. Zelenskyy believed them. Cut to the present. Mr. Zelenskyy went to the White House on February 28 to sign a minerals deal between Ukraine and the U.S. He was welcomed by his American counterpart, Donald Trump, at the Oval Office, before the leaders, along with Vice President J.D. Vance, sat down for a meeting. What followed was an extraordinary public spat between the two Presidents that was telecast across the world. “You right now are not in a very good position. You are not winning this... You don't have the cards right now,” Mr. Trump told the visiting Ukrainian President. It was a remarkable turnaround of events for both Ukraine and its leader. How did it happen?

Rise to the top

Born to Jewish parents in 1978, Volodymyr Zelenskyy grew up as a native Russian speaker in Kryvyi Rih, in central Ukraine. Joining politics was not even close to young Zelenskyy's imagination. He obtained a law degree from the Kryvyi Rih Institute of Economics, but never took law as a profession. His interests were elsewhere – the world of

entertainment. Mr. Trump recently called Mr. Zelenskyy “a moderately successful comedian”. But Mr. Zelenskyy was actually quite successful as an actor and comedian. In 1997, at age 19, he won popularity as his team appeared in the finals of *KVN (Club of the Funny and Inventive People)*, a comedy show that was broadcast across former Soviet republics. He later co-founded a studio, *Kvartal 95*, and joined hands with Ihor Kolomoisky, one of the wealthiest Ukrainians who owned the popular 1+1 network. Mr. Zelenskyy won national acclaim for his role as the fictional president of Ukraine, who fights the corrupt establishment, in the TV show, *Servant of the People*. It was this popularity that catapulted him to the centre of Ukrainian politics.

Mr. Zelenskyy promised to fight corruption, reform the system and make peace with Russia during the campaign, and won the second round of the 2019 presidential election with 73.23% vote, against incumbent Petro Poroshenko. But victory also put Mr. Zelenskyy in an unenviable position. Five years prior to his election, Russia had annexed Crimea. Ever since, a separatist civil war had been brewing in Ukraine's east.

After assuming office, Mr. Zelenskyy held a telephone call with Russian President Vladimir Putin, and later announced a preliminary deal with the separatists, who were backed by Russia. In 2020, he declared a formal ceasefire. But none of these efforts brought the fighting in Donbas to an end – the hard-right nationalists on the Ukrainian side, including the Azov Brigade with neo-Nazi links, rejected the deal with separatists, while Russia continued to back the latter. In September 2020, in the midst of the crisis in Donbas, Mr. Zelenskyy unveiled a new national security strategy that called Russia an ‘aggressor’ and identified NATO membership as Ukraine's key defence and foreign policy objective. Within two years, Mr. Putin would annex the Donbas Oblasts (Donetsk and Luhansk) and launch his invasion of Ukraine.

Mr. Putin may have wanted to wrap up his “special military operation” within days. But Ukrainian resistance

denied a quick victory to the Russians. Mr. Zelenskyy, who refused to leave the country, took shelter in a bunker in the early days of war. The then Israeli Prime Minister, Naftali Bennett, later recalled a conversation he had with Mr. Putin about Mr. Zelenskyy's fate. When he met Mr. Putin in Moscow in March 2022, Mr. Bennett asked him if he intended to kill Mr. Zelenskyy, to which the Russian leader said ‘No’.

“Are you giving me your word that you won't kill Zelenskyy?” Mr. Bennett asked again.

“I won't kill Zelenskyy,” said Mr. Putin.

Immediately after the three-hour meeting with Mr. Putin, Mr. Bennett called the Ukrainian leader and said: “I've just come out of a meeting –

[Putin] is not going to kill you.”

Mr. Zelenskyy asked Mr. Bennett, ‘Are you sure?’ He said, “100%.”

Two hours after their conversation, Mr. Zelenskyy took a selfie in his office and posted it with the caption “I'm not afraid,” Mr. Bennett recalled in a YouTube interview, published after he left the Prime Minister's office.

Fall from grace

The war turned Mr. Zelenskyy into a hero of sorts in the West: the man who stood up to “the evil dictator of Russia”. In March 2022, the Russians and Ukrainians were close to signing an agreement after talks in Istanbul to bring the war to an end, but Ukraine, egged on by the U.K. and the U.S., walked out of it at the last minute and

preferred to fight on (according to various accounts by people who were privy to the Istanbul talks). When the Russian troops were forced to withdraw from Kharkiv and later Kherson, Mr. Zelenskyy hailed it as a victory, and vowed to liberate all territories captured by Russia, including Crimea.

Ukraine got weapons worth billions of dollars from the West, mainly the U.S. But Mr. Putin, after the initial setback, announced a partial mobilisation, aimed at fighting a long war. In the following months, Ukraine started losing territories in the east. In 2023, Kyiv launched a much talked-about counteroffensive, with advanced weaponry supplied by the West, aimed at recapturing the territories seized by Russia. But it turned out to be a damp squib. Ukraine's fate was sealed in the months the counteroffensive failed.

But Mr. Zelenskyy continued to put up a brave face. His narrative was that if Ukraine falls, the Russians will march further towards the east, endangering Europe's security. But that was his Plan A and B. It worked as long as Joe Biden was there in the White House. But Donald Trump returned to power with an entirely different agenda and worldview. Mr. Zelenskyy, who was almost entirely dependent on defence supplies from the U.S., was hardly prepared for that.

Now, the Trump administration seems determined to bring the war to an end through a direct deal with the Russians, leaving Mr. Zelenskyy in the cold. He lost more than 20% of his country's territory. His troops are pushed back by the Russians on the battlefield. His country will not become a member of NATO. He is not going to get any security guarantees from the U.S. And, America wants a share of Ukraine's natural resources to recoup the aid it gave to the war-torn country. On top of it all, President Trump now thinks Mr. Zelenskyy is an impediment to peace. “He [Zelenskyy] disrespected the United States of America in its cherished Oval Office,” Mr. Trump posted on Truth Social immediately after Friday's meeting was over. “He can come back when he is ready for peace,” he said.

THE GIST

Zelenskyy, who presented himself as an alternative to the corrupt establishment and promised to make peace with Russia during the campaign, won the 2019 presidential election with 73.23% vote

After assuming office, Zelenskyy held a telephone call with Russian President Vladimir Putin and declared a ceasefire in the east, but those efforts failed to bring peace

In September 2020, Zelenskyy unveiled a new national security strategy that called Russia an ‘aggressor’ and identified NATO membership as Ukraine's key defence and foreign policy objective. Within two years, Russia invaded Ukraine

The outsider within

Shashi Tharoor

The four-time MP for Thiruvananthapuram has landed in back-to-back controversies after his comments on Kerala's industrial growth and Congress leadership

S.R. Praveen

Literature has often been Shashi Tharoor's calling card, at times even more than his politics, but words have also been his Achilles heel in politics, right from the “cattle class” and “holy cows” comments in 2009. Misinterpreted or otherwise, the four-time Lok Sabha MP's utterances and writings have frequently landed him in trouble, inviting the displeasure of the higher-ups in the Congress as well as fellow leaders in its Kerala unit.

The latest instance came last week when, in a newspaper interview, he purportedly underscored the absence of a leader in Kerala's Congress unit and also spoke about other “options”, including speaking tours and books, if the Congress did not require his services. Though Mr. Tharoor later accused the newspaper of putting a fake spin on the Malayalam podcast to make it seem as if he was exploring political options, the damage was already done, partly due to the history of his run-ins with the State leadership of the party. The impression that he was making a pitch for a leadership role ahead of the 2026 Assembly elections did not help matters either.

The controversy came close on the heels of another



one. Earlier in February, he said U.S. President Donald Trump's invitation to Prime Minister Narendra Modi was a “significant development” for the country. The next day, in an article, he praised the transformation of Kerala's industrial ecosystem driven by the “staggering growth” in the start-up sector. He also praised the Left Democratic Front (LDF) government's Year of Enterprises initiative, the State's “success” in establishing close to 3 lakh MSMEs since 2022 as well as its topping of the Ease of Doing Business rankings.

Mr. Tharoor's article, published right ahead of the State government's Invest Kerala Global Summit, came in handy for the ruling LDF, which used it to counter the Congress's dim view of the State's investment climate.

The State Congress leaders, who were not obviously happy at the comments, scrambled to counter his views, with the Congress's

Kerala mouthpiece *Veekshanam* also levelling some oblique criticism in an editorial. The issue died down only after Mr. Tharoor had a one-to-one meeting with Rahul Gandhi.

Entry into politics

Mr. Tharoor waded into politics in 2009, carrying with him the glory of a flourishing literary career and a long stint with the UN, which ended in an unsuccessful bid to the UN Secretary-General post. But, right from his early days, he had an “outsider” tag stuck to him, used openly by the opposing parties and more privately by his fellow party members.

Yet, he made up for the challenges he faced, including the not-so-friendly local party leadership, with his personal charisma. For four consecutive terms, he has held on to the Thiruvananthapuram Lok Sabha seat, which before his arrival used to alternate between the Congress and the Left. But,

since 2014, the Bharatiya Janata Party (BJP) has been giving him a close fight, with the 2024 win by a slender margin of 16,077 votes. The outsider tag still follows him, as even local Congress members are not so happy about his prolonged absence from the constituency.

Of late, Mr. Tharoor has begun priming himself for alternative and more ambitious roles. With opinions often at variance with the leadership, he has in recent years consistently played the role of the disruptor within the party, first as one of the 23 Congress leaders (G-23) who sought reforms within the party, which culminated in his making an unsuccessful bid to the party leadership post in 2022.

His current manoeuvres in Kerala closely resemble his actions at the national level in recent years. Coming a year ahead of a crucial Assembly election, in which the Congress is attempting a comeback after being kept away from power for an unprecedented two terms, his purported comments on the leadership attain added significance.

Though Mr. Tharoor's intentions are barely concealed, it is not going to be an easy ride to the top for someone who has ruffled so many feathers within his own party.

The conservative turn

Friedrich Merz

The man who could become Germany's next Chancellor has promised to impose border controls, revive the country's economy and keep supporting Ukraine and Israel

Joan Sony Cherian

While addressing the media after the results of Germany's Feb. 23 election were out, the leader of the leading conservative Christian Democratic Union (CDU) and its Bavarian sister party, Christian Social Union, Friedrich Merz, opined that the staggering rise of the right-wing Alternative for Germany (AfD), with its vote share of almost 20%, is a “real warning bell, a real alarm bell for the political parties”. However, for someone who has strongly ruled out any coalition with the AfD, effectively breaking the ‘Brandmauer’ or firewall that political parties have kept with the right-wing post the Second World War, for the motions he raised in the Bundestag in January on restricting immigration and asylum.

Mr. Merz's tougher stance on immigration has been seen as an attempt to gain some section of right-wing voters, especially in east Germany. In light of a knife attack carried out by an Afghan immigrant in the city of Aschaffenburg on January 22, Mr. Merz had promised that if he became Chancellor, he would “impose permanent border controls with all our



neighbours and refuse all attempts at illegal entry”. He stated that the knife attack was evidence of a “failed” immigration system. Mr. Merz was born into an affluent family, with his father also being a member of the CDU. Mr. Merz joined the CDU as a young boy, and was briefly engaged in the military before becoming a lawyer. Keen to make his entry in politics, he was elected to be a member of the CDU's wing in the European Parliament in 1989. After being elected to the German parliament in 1994, Mr. Merz established himself in the CDU as a leading economic policy expert, and was a favourite of the more conservative faction within the CDU.

However, after the rise to power of CDU stalwart Angela Merkel, Mr. Merz resigned from politics in 2009 and went back to practising corporate law full-time. In the interim, before his return to the CDU in 2018, Mr. Merz

ILLUSTRATIONS: SREEJITH R. KUMAR



served on the board of many multinational companies and trusts. Always staunchly pro-business, Mr. Merz was until recently a strong supporter of the U.S. and trans-Atlantic trade. Under President Donald Trump however, Mr. Merz has stated that the U.S. seems indifferent to Europe's fate, and that the continent needs to build its own defences without relying on the U.S.

Rivalry with Merkel

Before his exit from politics in 2009, Mr. Merz was considered an up and coming leader of the CDU, and even became the parliamentary leader of the party in 2000. However, his rise to the very top was blocked by the increasing dominance of Ms. Merkel, who was the chairwoman of the CDU at the time. To Ms. Merkel, Mr. Merz was a tad too conservative to be a centrist as she was, and after the party's electoral defeat in 2002, she removed Mr. Merz from his post as

the parliamentary leader. Therefore, it is unsurprising that his return to the party was after Ms. Merkel resigned from the CDU leadership.

After being sidelined by Ms. Merkel, Mr. Merz's bid for leadership of the CDU was thwarted twice – once in 2018 and the other in January 2021. He was finally elected party leader in December 2021, and has shown himself to be quite a different leader compared to Ms. Merkel – central to this being his vastly different stance on immigration in contrast to Ms. Merkel's open borders policy.

Apart from a divided polity and an unpredictable U.S. government, Germany's economic woes are aplenty. The economy, suffering from the phasing out of cheap energy from Russia and the strict ‘debt brake’, needs a major boost, which Mr. Merz has promised to deliver by cutting down expenses on bureaucracy. Additionally, Mr. Merz, who is critical of the Russian regime, has offered all support to Ukraine. Mr. Merz is also an avid supporter of Israel, and has said that he will invite the Prime Minister of Israel, Benjamin Netanyahu, to Germany after he becomes Chancellor in open defiance of the International Criminal Court's arrest warrant for Mr. Netanyahu.



Every winter, Punjab's wetlands welcome winged guests from as far away as Central Asia and Africa. From breeding to resting and refuelling, thousands of migratory birds rely on the wetlands and the flora and fauna these support.

UPLIFTING

It's been a busy season in Punjab's wetlands as migratory birds arrive in larger numbers

AMAN SOOD

IT'S a much-anticipated ritual at Punjab's wetlands that never fails to spring a surprise. Every year, the Punjab Wildlife Department documents sightings of migratory birds from as far away as Central Asia and Africa. As climate change and global warming affect wildlife patterns, careful consideration is given to the absence and presence of the avian guests. This time around, it has been a productive and uplifting outing for the department staff, ornithologists, bird-watchers and enthusiasts alike. Much to their relief and delight, the migratory birds, including several rare ones, have come in swarms.

According to the Union Ministry of Environment and Forests, Punjab has 1,143 mapped wetlands, with an area of roughly around 90,000 hectares. There are 89 Ramsar sites in India; it ranks third globally in the number of such sites. Punjab's prominence on the world wildlife map got a boost in 2020 when three more wetlands were accorded the international Ramsar tag. These sites are recognised as being of significant value not only for the country or the countries in which they are located, but for humanity as a whole. (There are currently more than 2,500 Ramsar sites around the world, covering over 2.5 million square kilometres, an area larger than Mexico).

Punjab already had three Ramsar sites — Harike, which falls in Kapurthala, Ferozepur

and Tam Taran districts; Kanjli in Kapurthala district; and Ropar. To the list were added the Keshopur community reserve, Beas conservation reserve and Nangal wildlife sanctuary, taking the number to six.

Dharminder Sharma, Principal Chief Conservator of Forests and head of the Forest Force, says spotting raptors like the Red-headed Falcon, Peregrine Falcon, Eurasian Hobby and Eastern Imperial Eagle at Harike and Keshopur-Miani shows that the Punjab wetlands continue to attract birds from far-off areas. "It indicates that our wetlands have a good prey base for these raptors. The preservation of wildlife, especially migratory birds, remains the top priority of the department," he adds. "Birds from as far away as Siberia have turned up, which is a rare phenomenon."

Gitanjali Kanwar, Senior Coordinator, Aquatic Biodiversity, World Wildlife Fund-India, says the turnout of water birds in Punjab's wetlands continues to be "decently good" despite challenges at the global level. "Flocks of rare birds like Northern Lapwing and Black-tailed Godwit were sighted at Harike. Species like Jerdon's Babbler, Rufous-vented Prinia and Short-eared Owls have also been spotted," she adds.

"There's been a marginal increase in the number of water birds (resident and migratory) in Punjab's wetlands. The winter season has been very brief this year and rare waterbirds and species of high conservation significance have been spotted. These include the flamingos in Harike, flocks of Northern Lapwing and raptors like Steppe and Eastern Imperial Eagle in Keshopur-Miani and Shalapatan wetlands. The Nangal wetland, like every year, had Black-necked Grebes," says Kanwar.



A pair of Greater Flamingos seen this year at Harike after last sighting at the same place in 2017.

Punjab Chief Conservator of Forests (Wildlife) Satender Sagar claims the recent sighting of the Bar-headed Goose is a welcome sign for the state's wetlands as this goose species breeds in Central Asia in colonies of thousands near mountain lakes and during winter in South Asia. "The unique thing about this bird is that it flies very high, and even crosses the Himalayas to visit Punjab, flying over difficult terrains and extreme altitudes," says Sagar, excited about the frequent sightings at Punjab wetlands.

Amid the positive news, a note of caution comes from Jaskaran Sandhu, former member of the Punjab State Board for Wildlife. "Global warming is changing weather patterns and affecting bird migration. Delayed winter, pollution and shrinking water bodies are all affecting migration of birds across the globe. It's a challenge we must never lose sight of," he says.

"Many bird species migrate in order to survive. However, migration is a perilous journey. Only a small number of birds are actually threatened by natural events while human activities are the source for most dangers," says Maj AP Singh (retd), another former member of the Punjab State Board for Wildlife. An avid bird-watcher, with an experience of more than 40 years, he adds that the loss of habitats due to pollution or encroachment for settlement, agriculture, grazing, etc, is the main threat migratory birds face. "They are dependent on finding suitable breeding and wintering grounds as well as stopover sites, along their flyways, where they can rest and feed. The loss of any of

these sites during their annual cycle could have a dramatic impact on the birds' chances of survival. Poaching remains another threat."

As per the initial sightings by the Wildlife Department and the World Wildlife Fund, the migratory birds that have been spotted include the Spot-billed Duck, Ruddy Shelduck, Mallard, Northern Pintail, Comb Duck, Coot, Dabchick, Northern Shoveler, Lesser Whistling Duck, Domicile Crane, Greater Flamingo, Ferruginous Pochard, Peregrine Falcon, Long-eared Owl, Common Pochard, Woolly-necked Stork, Eurasian Coot, Gadwal, Greylag Geese, Little Cormorant, Pied Avocet, Great Cormorant, Common Teal, Black-tailed Godwit, Steppe Gull and Brown-headed Gull.

Records from Harike show sightings of Bonelli's Eagle, Hen Harrier, Peregrine Falcon, Red-headed Falcon, Cotton Pygmy Goose, Northern Lapwing and Greater-crested Grebe.

May 10 is World Migratory Bird Day, but it's a good time to remember UN Secretary-General Antonio Guterres' message: "As they travel the globe, migratory birds lift our spirits and remind us of nature, connecting people, ecosystems and nations." And his terse reminder: "Our continued encroachment on nature and the destruction of vital habitats are putting many migratory birds at risk of extinction."

Any positive development thus is a moment to cherish, and also to reflect. Protecting the habitats of migratory birds is of critical importance.

PUNJAB'S WETLANDS

- Keshopur-Miani community reserve in Gurdaspur, spread over 343.9 hectares (ha), is a natural wetland. It is the only habitat for Sarus and common cranes in the state.
- Beas conservation reserve, spread over a 185-km stretch of the Beas river starting from Talwara to Harike headworks, covers seven districts — Hoshiarpur, Gurdaspur, Amritsar, Jalandhar, Kapurthala, Tam Taran and Ferozepur. It is the only place in the country that hosts the Indus River Dolphins.
- The man-made wetland of Nangal wildlife sanctuary, with an area of 116 ha, came into existence as a result of the Bhakra-Nangal project in 1961. The surrounding forests are located in the highly eco-sensitive Shivalik foothills.

RECENT CENSUS

- In Harike, 89 bird species were recorded with a total count of 55,059 birds, up from 50,529 birds seen in 2024.
- In Kanjli wetland, 20 species and 443 birds were recorded this year as compared to 23 species and 669 birds in 2024.
- In Keshopur, 78 species with 13,676 birds have been recorded this year as compared to 10,857 birds of 66 species in 2024.



Pallas's Gull in flight. The pale, deep-chested, long-winged gull chiefly feeds on fish (particularly dead), insects and small mammals.

THE RAMSAR TITLE

A Ramsar site is a wetland designated to be of international importance under the Ramsar Convention. The Convention on Wetlands, known as the Ramsar Convention, is an inter-governmental environmental treaty established in 1971 by UNESCO, which came into force in 1975. It is named after the city of Ramsar in Iran, where the convention was signed.



Red-headed Falcon mostly preys on small birds and usually hunts in pairs.

PHOTOS BY THE WRITER

Why you should never leave a child alone in a car

Even on cloudy days with lower ambient air conditions, the temperatures inside can reach dangerous levels

PUSHPA GIRIMAJI

LEAVING a child alone in a car is fraught with danger. If the car is locked with all the windows closed, the child runs the risk of suffering severe heat stroke, as cars heat up very quickly and children are extremely susceptible to heat. If you keep the engine idling, with the key in the ignition and the air-conditioner running, your child can get kidnapped, or your car may get stolen, along with the child.

A couple in Kerala learnt this the hard way when their car got stolen, along with their toddler in the backseat, in January this year. On their way to a relative's house in Kozhikode, the couple stopped at a bakery. Their child was sleeping at the back, so they left the car engine idling to keep the air-conditioning on and stepped out to buy a few items. To their horror, their car was stolen, along with the child at the back! Fortunately for them, it all ended on a happy note — the thief was caught and the child, abandoned after two hours on the roadside, was picked up safe and sound!

There was an almost identical incident in Delhi last June. Here, the couple left their two kids — an 11-year-old girl and her three-year-old brother — in the car, with the AC running, while they went into a confectionery shop in East Delhi. When they returned, they found their car stolen, along with the children. After a three-hour police chase involving 20 police vehicles, the culprits abandoned the vehicle and the children too. One may find it hard to believe, but there are innumerable

instances of parents, and in some cases a grandparent, leaving behind a sleeping child in the car by mistake. There are also cases of parents leaving a child behind in the car while going on a short errand, believing the car to be a safe place. With the windows up and the car locked, the temperature inside the car goes up so quickly that a child is unable to withstand it.

In May last year, a couple from Kota district, Rajasthan, lost their three-year-old daughter to vehicular hyperthermia. The parents were going to a wedding with their two daughters and when the father stopped the car in front of the venue, his wife and the elder daughter exited. The father presumed that all three had left and so parked and locked the car and went in, leaving the sleeping child behind. By the time they realised that three-year-old Gorvika was missing and went to get her, it was too late.

In another tragic incident on October 30, three-year-old Vartika became a victim of heat stroke in a locked car in Meerut. In this case, it was not her parents, but a colleague of her father who took her for a ride in the car and then left her in the parked car, planning to return shortly. The heat inside the car killed the child. There are several websites that help you calculate the

temperature inside a car at different ambient temperatures. When the outside temperature is 30°C, for example, the temperature inside a car goes up to almost 50°C (48.89°C, to be precise) in just 30 minutes! In 15 minutes, it hovers over 43°C. Eighty per cent of the temperature

rise, it is estimated, occurs within the first half an hour. A study published in March 2009 in the *International Journal of Meteorology* reveals that even on cloudy days with lower ambient air temperatures, the temperatures inside a car can reach dangerous levels.

The National Highway Traffic Safety Administration in the United States says that a child's body temperature rises three to five times faster than an adult's and heat stroke occurs when the body temperature reaches 104°F (40°C). A child can die when it reaches 107°F (41.6°C).

Cars seem to hold a special attraction for children when it comes to playtime and that's how many of them enter the vehicle and get trapped when the doors automatically get locked. In Kochi, Kerala, two-year-old Ritwick got inside his father's car parked in front of the house and locked himself up by pressing the lock button on the key. The parents did not have the spare key and eventually had to call the Fire and Res-



Cars seem to hold a special attraction for children during playtime, and many get trapped when the doors get locked automatically. ISTOCK

cue Services to get the child out — the entire process took 45 minutes early in the morning and the child was traumatised inside. There was a similar incident in Thiruvananthapuram, Kerala, in July. Here, the parents were lucky but there are many unfortunate cases where the children are found too late.

In November, four siblings, aged 2-7 years, died in a car in Radadiya village in Gujarat's Amreli district. The parents had gone to work on a farm and the children got into the car of the farm owner and were unable to get out when the doors automatically locked. By the time they were found, all had succumbed to heat stroke.

Earlier, in May, a three-year-old girl in Bhadradi Kothagudem district in Telangana met the same fate when she accidentally got locked inside a car parked in front of her house. The same month, six-year-old Kaunen and his four-year-old cousin Abdullah, playing in the compound of their house in Raebareli district in Uttar Pradesh, got into a parked SUV and got locked. Heat stroke claimed their lives.

A month prior to that, two children reported missing by their parents in Central Mumbai were found dead in an abandoned car parked in Antop Hill.

So, never leave a child alone in a car, even for a short time, and if you are the forgetful type, keep a paper reminding you of the child at the back, pasted on the windshield! Make sure that any child that enters a car exits safely. Always keep your car locked and store the key in a place where children cannot access it.

— The writer is a consumer rights and safety expert