id you know that April is Active Dog Month? That's right, it's a month created that's all about enjoying spring and getting active with your 'furry' best friend! Dogs need exercise and fun just as much, if not more, than their humans. Bond with your furry friends by playing, running, or exploring new places with them. Take longer walks, explore new areas, and spend time in the warm sunshine! All you need is a leash to get started. Discover new, creative ideas for logging beneficial activity with your dog.

राष्ट्रदुत

#ADVENTURE

All You Need To Know About The Kashmir Great Lakes Trek

This journey takes hikers through some of the most arresting landscapes imaginable, offering a glimpse into the Kashmir region's rich history, diverse





Lakes Trek is a challenging six-day hike, spanning 75 kilometres in the Western Himalayas of Kashmir. On an average, the trek involves more than 12 kilometres of hiking per day. It begins at Naranag, suitable for indi-

Kashmir Great Lakes Trek

Trek is located in the northern Indian state of Jammu and Kashmir which is often referred to as Paradise on Earth.' This region has a rich history influenced by various civiliincluding Mughals, Sikhs, and British. The trek winds through the heart of the Kashmir Valley, offering breath-taking views

cally lasts for 6-9 days and is graded as 'moderate' in terms of difficulty. The elevation is around 13000 feet, and the distance covered is approximately 63 kms. This trek offers a fulfilling experience, where you can learn a lot about yourself, physically and mentally. As a trekker you'll experience the best of landscapes and adrenaline

Landscape & Biodiversity

for its impressive array of wildlife and natural beauty. Trekkers will be surrounded by diverse flora and fauna, including rare species such as the Kashmir stag (Hangul), snow leopard, and black bear. The trek takes hikers through dense pine, oak, and rhododendron forests, where they will have plenty of opportunities to spot wildlife and watch

breath-taking, featuring seven stunning alpine lakes. Each lake offers a unique and unforgettable view, from the serene Vishansar Lake to the sparkling Gangabal Lake. Along the way, trekkers will ows, towering glaciers, and cascading waterfalls, providing an immersive nature

Places To See

long the trek, hikers can A witness places like Sonamarg, a beautiful hill station that serves as the starting point of the trek. It is known for its lush meadows and snowcapped peaks, which offer a picturesque view. Nichnai Pass is another attraction on the route, a high mountain pass that provides stunning views of the surrounding vallevs and glaciers. Vishansar *Lake* is the first of the seven lakes on the trek. It is known

serene surroundings, which make it a beautiful spot to rest. Gadsar Lake is at an altitude of 3,800 metres and is one of the most beautiful lakes on the trek. It is surrounded by snowcapped peaks and alpine meadows, which make it a breathtaking sight. Gangabal Lake is the largest and most famous lake on the trek. Locals revere it as a 'sacred place' and it offers breath-taking views of Mount Haramukh



biodiversity and unparalleled beauty.





advisable for trekkers to have prior experience on

The Kashmir Great Lakes Trek is amidst peaceful valleys and towering peaks of the Himalayas, attracting adventurers from across the

Here's all you need to know about the Kashmir Great Lakes Trek, before you embark with your friends on

rounding mountains. It typi of its famous lakes and sur-

The great trek stands out birds. The trek's landscape is experience.

for its crystal-clear waters and

Dr Goutam Sen CTVS Surgeon

site 180 kilometre segment of the

Delhi-Mumbai Expressway, albeit

deceptively undulating at places.

This eight-lane road is a smooth

fast-driving segment comparable

Although, the distance has

increased and the toll is higher,

this has become the preferable

route. The speed limit for cars on

this road is 120 km per hour. The

ride, therefore, is enjoyable and

with the newer cars, driving with

Sukriti, my granddaughter,

returned from a brief holiday in

Thailand. It was an impromptu

trip and she enjoyed it well. She

was able to see the new restaurant

'Tapori,' which her chacha, Rohit

a fun trip with Sitara, a cousin

from UK. A small stay in Ko Samet

was well enjoyed. When she

climbed into the taxi at IGI airport

to return to Jaipur, she was look-

ing forward to meeting the family

and regaling us with her experi-

There was one experience that

Despite higher permitted

speeds, most taxi drivers still drive

at about a steady 90 to 100 km per

hour on the Expressway and make

cruise control, it is less tiring.

international standards.

the trip in about four hours. fter the recent open Expressway 4 (NE4), most of our family commutes, to Delhi and Gurugram, have been on this road. Highway 48 (NH 48), with its chaotic traffic and many diversions, along with slow-moving overloaded trucks, running in all the lanes, was always not only tiring but also bit frightening. The continuous lane changing, on both sides of the vehicle ahead, was tense and against the rules. I often said to my friends that driving on Indian highways, we follow the American style of keeping to the 'right' and overtaking from the 'left.' The new expressway, from Bhandarej to Sohna, is an exquitaught and practiced by the partic-

ipants on dummies. Reflexly, all the lessons, that profuse bleeding from the large Once things were under control had just opened in Bangkok. It was on to check the male driver, who conveved to the father that every thing was in reasonable control and there was no imminent danger to life. The ambulance had been

#EXPRESSWAY SENSE

Sukriti's taxi was doing the same, when they saw a collection of people and a damaged car ahead, just as they were coming out of the rest area. The normal reaction in such circumstances is not to stop, if there are people already attending to the accident victims. But this time, Sukriti decided to stop, as she saw a woman lying on the road in a disheveled state, with bleeding from her head. The all-male group around her was hesitant to attend to her, probably fearing an allegation of molestation. The frock, that she was wearing, had been blown upwards and the lower part of the body was exposed. Sukriti is a non-medico in a family of doctors and she had recently attended a Basic Life Trauma Support Course (BLTS) at the SDM Hospital, under the aegis of the Orthopedic Department and ROSA, where Cardiopulmonary Resuscitation (CPR) had been

she had learnt, flashed in her mind. She quickly knelt beside the woman and checked her pulse and breathing. The eye movements, too, were normal. The accident victim indicated to Sukriti that she was able to understand and obey her instruction and to move her limbs. The acute problem was the scalp wound on the back of the head. One of the truck drivers' handed Sukriti a cotton scarf, which she wrapped around the head, and applied firm pressure. she handed over the compression to one of the onlookers, and went was still sitting in the car and speaking on the mobile in a groggy fashion. The car door had jammed As she approached him, he too fell into a faint. She grabbed the phone from him as he was pulled out of the car. She realised that he had been speaking to his father. She

already called and was expected

clad person had also rushed from the rest area. He made sure tha the regular traffic continued to move and no traffic jam took place.

Then, she did an amazing thing. Being a mobile savvy per son, she switched the 'live' and 'current' location on the phones of the victims. When she handed the phones to the medics from the ambulance, she made sure that they carried the phones with them. This action assured that the family would always know where the accident victims were being taken. Once the ambulance was

loaded and moved towards the nearest trauma hospital, Sukriti realised what she had done. While she was washing her blood stained hands and arms, and the adrenaline rush was subsiding she felt the 'enormity' of the deed She felt totally drained and vet. the good effect of a job 'well done seeped into her consciousness. Later, when she was relating the incident to us, some questions

Why had the 'police' not arrived even though, more than twenty minutes had passed since the call? Inadequate staff? Callousness? • What happens to the vehicle

and varieties, including com-

Sterile Gauze Pads and Roll

Antiseptic Wipes or Betadine

Scissors and Tweezers

Disposable Gloves

Medical Tape

been put on the road to warn and its contents, once the pasthe oncoming traffic? There is sengers have been evacuated? Many instances of vandalisaa 'triangular red marker' in tion, theft and loot have been the tool kit of most vehicles, reported but exact data is diffinowadays.

Antiseptic

• First Aid Instruction Booklet

Distiller water for cleaning

Emergency Blanket

Medication for pain or

Sterile Eve Wash Solution

Finally, it is

essential to be

trained! Having

the equipment but

not knowing the

use is stupid!

What should a first aid box contain?

cult to find

Overturned

trucks and deliv-

tents are looted.

ery vans are the

biggest targets of

such action. The con-

Why had people, who

had reached the acci-

dent site earlier, not

helped the victims? What

Is there a false modest

about attending to females?

was the probable cause?

The acute problem was the profuse bleeding from the large scalp wound on the back of the head. One of the truck drivers' handed

Sukriti a cotton scarf, which she wrapped around the head, and applied firm pressure. Once things were under control, she handed

Citizen's Duty on Indian Highways

over the compression to one of the onlookers, and went on to check the male driver, who was still sitting in the car and

speaking on the mobile in a groggy fashion. The car door had jammed. As she approached him, he too fell into a faint.

 Although there were half-aaccident site be allowed? We dozen trucks parked on the asked Sukriti for the car numroadside, why was a first aid kit ber. She did not recall it and not offered? An informal had not thought of recording

polling about first aid boxes it. Commonly, the accusation revealed that most cars are is that most spectators are given a miniscule first aid box keener to use mobile camera at the time of purchase but that rather than help. has never been opened or used! The Central Government has Why had 'hazard markers' not

been constantly looking into all aspects of accidents on the road. It must be remembered that only 5% of the accidents take place on highways and expressways. The large numbers are in the urban A total number of 4.61.312 road

accidents have been reported by States and Union Territories (UTs) during the calendar year 2022. claiming 1,68,491 lives and causing injuries to 4,43,366 persons. There must be many more incidents of a lesser nature which remain unreported! The number of road accidents in 2022 increased by 11.9 per cent compared to previous year 2021 (which was a Covid Year). Similarly, the number of deaths and injuries, on account of road accidents, were also increased by 9.4 per cent and 15.3 per cent, respectively. These figures translate, on an average, into 1,264 accidents and 462 deaths every day or 53 accidents and 19 deaths every hour in the country

Road accidents, being the result of inter-play of multiple factors, multipronged measures are needed to reduce the number of accidents and fatalities

Amongst the States, Tamil Nadu with 64.105 accidents (13.9%), recorded the highest number of road accidents in 2022 followed by Madhya Pradesh (54,432 i.e., 11.8%). Uttar Pradesh (22,595 i.e., 13.4%) topped the States with respect to the number of fatalities due to road accidents followed by Tamil Nadu (17,884 i.e., 10.6%). Road accidents and deaths

took place on different categories

of NH due to traffic rules' viola-

tion. This data reveals that 'over-

speeding' is the major cause for road accidents and deaths. In 2022, 72.4 per cent of accidents and 75.2 per cent of deaths were recorded due to 'overspeeding. The other major traffic rules' violike 'drunken driving/consumption of alcohol and drugs,' 'jumping red light,' 'driving on wrong side,' 'use of mobile phones' etc. registered an increase in 2022 compared to 2021. The element of 'overspeeding' needs elaboration. Most Indian drivers have 'graduated' from two-wheelers to four-wheelers. The two-wheeler driving has inculcated some bad habits like overtaking from the wrong side, frequent lane changing, spurts of high speed, even in congested areas. These habits need to be changed when driving a fourwheeler, which is based on the principle of 'Box' driving.

There is considerable underestimation of the power of the cars and the swerving that takes place at high speed due to road surface and even wind. This is grossly underestimated. Most cars, driven

on Indian roads, fail to conform to safety of International levels, hav ing been built mostly of plastic and not even having a solid frame. In addition, cars, in poorly main tained condition, are driven too fast. I wonder how many car own ers do an under the bonnet check before a long drive? The condition and quality of the tyres in India are as vet not designed for high speeds. Being hit from the back constitutes nearly 55% of all high way accidents. This is ample evidence that the 'safe distance' between vehicles, driving at high

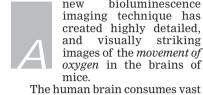
speed, is not maintained. Nitin Gadkari admits that despite so many successes, the NHAI has admitted dismal failure in prevention of accidents. The rules are there and as usual implementation is the main deficit. The highways need to be policed in a far more efficient manner, not only by having more police vehicles on the spot but also by the use of modern methods of 'speed checking' and detection of other infringements. Speed camera and heavy fines are just the beginning. If finances are an issue, there should be no hesitation in increasing the tolls to defray the costs. Being penny-wise and pound-foolish is no answer!

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#TECHNOLOGY

Glowing Protein

We can monitor changes in oxygen concentration continuously and in a wide area of the brain



The human brain consumes vast amounts of energy, which is almost exclusively generated from a form of 'metabolism' that requires oxygen. While the efficient and timely delivery of oxygen is known to be critical to healthy brain function. the precise mechanics of this process have largely remained hidden from scientists.

The new method, which can be easily replicated by other labs, will enable researchers to more precise brain, such as the denial of oxygen to the brain that occurs during a stroke or heart attack. The new research tool is already providing insight into why a sedentary lifestyle may increase risk for diseases like Alzheimer's.

"This research demonstrates that we can monitor changes in oxygen concentration continuously and n a wide area of the brain," says Maiken Nedergaard, co-director of the Center for Translational Neuromedicine (CTN), which is based at both the University of Rochester and the University of "This provides us a with a more

detailed picture of what is occurring in the brain in real time, allowing us to identify previously undetected areas of temporary hypoxia, which reflect changes in blood flow that can trigger neurological

The new method employs luminescent proteins, chemical cousins of in fireflies. These proteins, which have been used in cancer research. employ a virus that delivers instructions to cells to produce a luminescent protein in the form of an enzyme. When the enzyme encounters a second chemical compound a substrate called furimazine, the chemical reaction generates light.

Like many important scientific discoveries, employing this process, to image oxygen in the brain, was stumbled upon by accident. Felix Beinlich, an assistant professor in the CTN at the University of Copenhagen, had originally intended to use the luminescent protein to measure calcium activity in the brain. It became apparent that there was an error in the production of the proteins, causing a

nonths-long delay in the research. heart attack. But what happens While Beinlich waited for a new when very small parts of the brain batch from the manufacturer, he are denied oxygen for brief peri decided to move forward with the This question was not even experiments to test and optimize the monitoring systems. The virus being asked by researchers until the was used to deliver enzyme-produc

eam in the Nedergaard lab began to ing instructions to astrocytes, ubiquitous support cells in the brain, that maintain health and signaling peing cut off.

strate was injected into the brain via a craniotomy. The recordings revealed activity, identified by a luctuating intensity of biolumines cence, something that the out the brain via a vast network of researchers suspected, and would arteries and smaller capillaries, or later confirm, reflected the presmicrovessels, which permeate brain tissue. Through a series of "The chemical reaction in this experiments, the researchers were instance was oxygen-dependent, so, able to determine that oxygen was when there is the enzyme, the subbeing denied due to capillary strate, and oxygen, the system starts stalling, which occurs when white plood cells temporarily block microvessels and prevent the pas sage of oxygen carrying red blood cells. These areas, which the researchers named 'hypoxic pock ets.' were more prevalent in the

to glow," says Beinlich. While existing oxygen monitor ing techniques provide information out a very small area of the brain, the researchers were able to observe, in real time, a large section of the cortex of the mice. The intensity of the bioluminescence corresponded with the concentration of oxygen, which the researchers demonstrated by changing the amount of oxygen in the air which the animals Changes in light intensity also corresponded with sensory processing. For example, when the mice's whiskers were stimulated with a puff of air, the researchers could see the corresponding region of the brain light up.

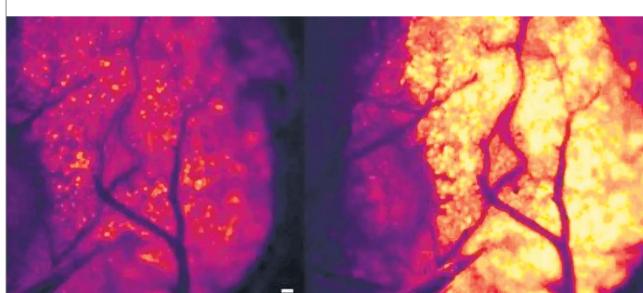
functions of neurons, and the sub

ence and concentration of oxygen.

The brain cannot survive long without oxygen, a concept demonstrated by the neurological damage. that quickly follows a stroke or look closely at the new recordings While monitoring the mice, the researchers observed that specific iny areas of the brain would go lark, sometimes for minutes, meaning that the oxygen supply was Oxygen is circulated through

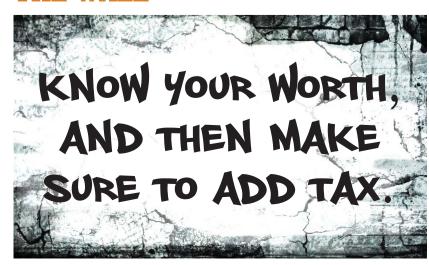
brains of mice during a resting state, compared to when the ani mals were active. Capillary stalling is believed to increase with age and has been observed in models of Alzheimer's disease. "The door is now open to study a range of dis eases associated with hypoxia in the brain, including Alzheimer's vascular dementia, and long COVID, and how a sedentary lifestyle, ageing, hypertension, and other factors contribute to these diseases," says Nedergaard.

"It also provides a tool to test different drugs and types of exercise that improve vascular health and slow down the road to dementia.'



THE WALL

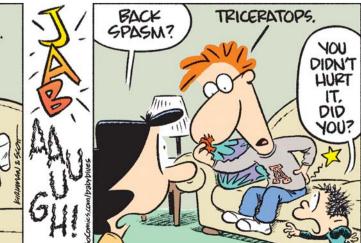
she had not anticipated!



BABY BLUES



By Rick Kirkman & Jerry Scott



ZITS





