













## Active Dog Month

**D**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 fury best friend! Dogs need exercise and fun just as much, if not more, than their humans. Bond with your fury friends by playing, running, or exploring new places with them. Take longer walks, explore new areas, and spend time in the warm sunshin! All you need is a leash to get started. Discover new, creative ideas for logging beneficial activity with your dog.

## #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 biodiversity and unparalleled beauty.



**T**he Kashmir Great 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 10 kilometres of hiking per day. It begins at Sonamarg and ends at Narang, suitable for individuals aged 15 and above. Considering the terrain, it is advisable for trekkers to have prior experience on this climb.

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

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

## Kashmir Great Lakes Trek

**T**he *Kashmir Great Lakes 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 civilisations, including the Mughals, Sikhs, and British. The trek winds through the heart of the Kashmir Valley, offering breath-taking views of its famous lakes and sur-

rounding mountains. It typically 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 like never before.

## Landscape &amp; Biodiversity

**T**he great trek stands out 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 (*Hircus*), 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

birds. The trek's landscape is 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 also encounter vast meadows, towering glaciers, and cascading waterfalls, providing an immersive nature experience.

## Places To See

**A**long the trek, hikers can 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 snow-capped peaks, which offer a picture-perfect view. *Nichnai* is another attraction on the route, a high mountain pass that provides stunning views of the surrounding valleys and glaciers. *Vishansar Lake* is the first of the seven lakes on the trek. It is known

for its crystal-clear waters and 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 snow-capped peaks and alpine meadows, which make it a breath-taking 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.



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 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.



## Citizen's Duty on Indian Highways



## #EXPRESSWAY SENSE

**T**he trip in about four hours. 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 distress, with a large gush of blood that 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 'normity' of the deed. She felt totally drained and yet, the good effect of a job 'well done' settled in her consciousness.

Later, when she was relating the incident to us, some questions popped up.

- Why had the 'police' not arrived even though, more than twenty minutes had passed since the call? Inadequate staff? Callousness?
- What happened to the vehicle and its occupants? Did the passengers have been evacuated? Many instances of vandalism, theft and loot have been reported but exact data is difficult to find.
- Overturned trucks and delivery vans are the biggest targets of such action. The contents are looted.

Why had people who had reached the accident site earlier, not helped the victims? What was the probable cause?

- Is there a false modesty about attending to females?
- Although there were half-a-dozen trucks parked on the roadside, why was a first aid kit not offered? An informal polling about first aid boxes revealed that most cars are given a minuscule first aid box at the time of purchase but that has never been opened or used.

● Why had 'hazard markers' not been placed on the road to warn the oncoming traffic? There is a 'triangular red marker' in the tool kit of most vehicles, nowadays.

Road accidents being the result of inter-play of multiple factors, multi-pronged 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%).

The Central Government has 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 remaining 95% of all high-way accidents. This is ample evidence that the 'safe distance' between vehicles, driving at high speeds, is not maintained.

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 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.

It is

noteworthy 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, 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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## What should a first aid box contain?

- Bandages in various sizes and varieties, including compression bandage
- Sterile Gauze Pads and Roll
- Medical Tape
- Scissors and Tweezers
- Disposable Gloves
- Antiseptic Wipes or Betadine spray
- Antiseptic and allergy creams
- First Aid Instruction Booklet
- Distiller water for cleaning
- Emergency Blanket
- Medication for pain or
- Sterile Eye Wash Solution



Finally, it is essential to be trained! Having the equipment but not knowing the use is stupid!



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, having been built mostly of plastic and not even having a solid frame. In addition, cars, in poorly maintained condition, are driven too fast. I wonder how many car owners do an *under the bonnet check* before a long drive? The condition and quality of the tyres in India are as it is not designed for high speed. Based on data 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.

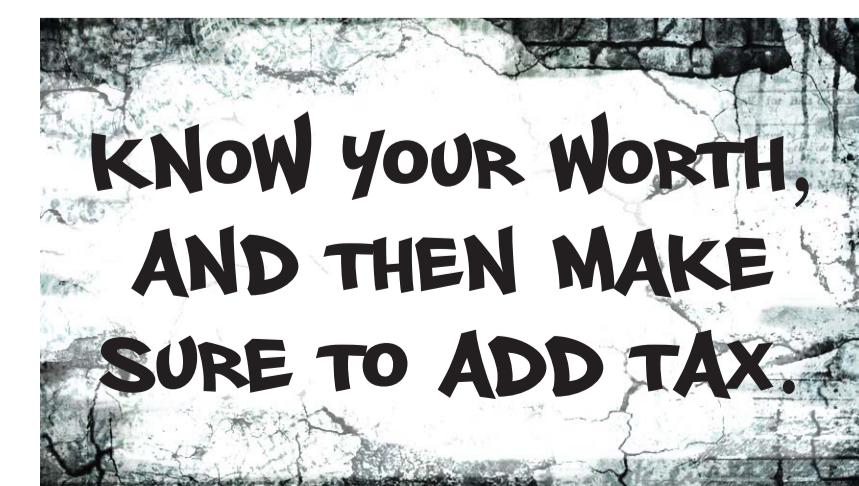
Road accidents and deaths took place on different categories of NHAI roads. In traffic zones, it must be remembered that only 5% of the accidents take place on highways and expressways. The remaining 95% of all high-way accidents. This is ample evidence that the 'safe distance' between vehicles, driving at high speeds, is not maintained.

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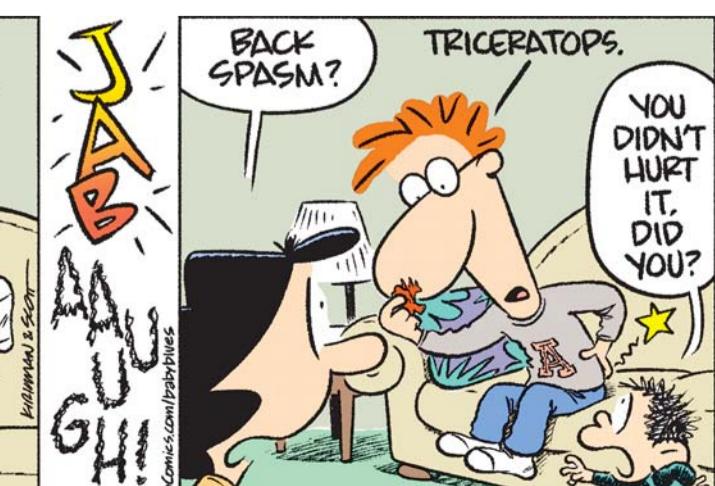
## THE WALL



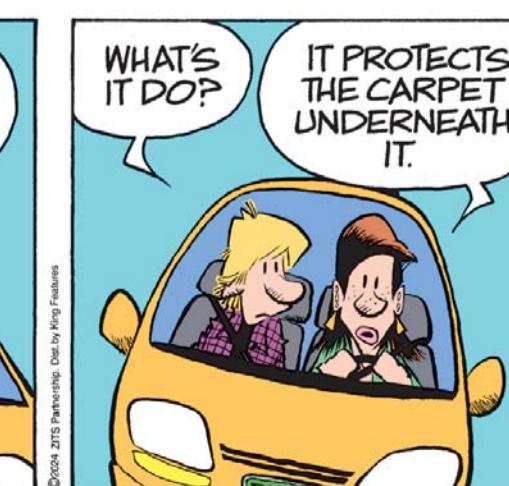
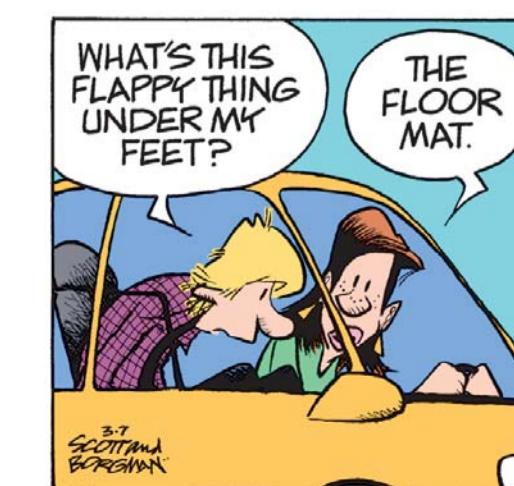
## BABY BLUES



By Rick Kirkman & Jerry Scott



## ZITS



By Jerry Scott & Jim Borgman

## #TECHNOLOGY

## Glowing Protein

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

**A** new bioluminescence imaging technique has created highly detailed, and visually striking images of the movement of oxygen in the brains of mice.

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 has largely remained hidden from scientists.

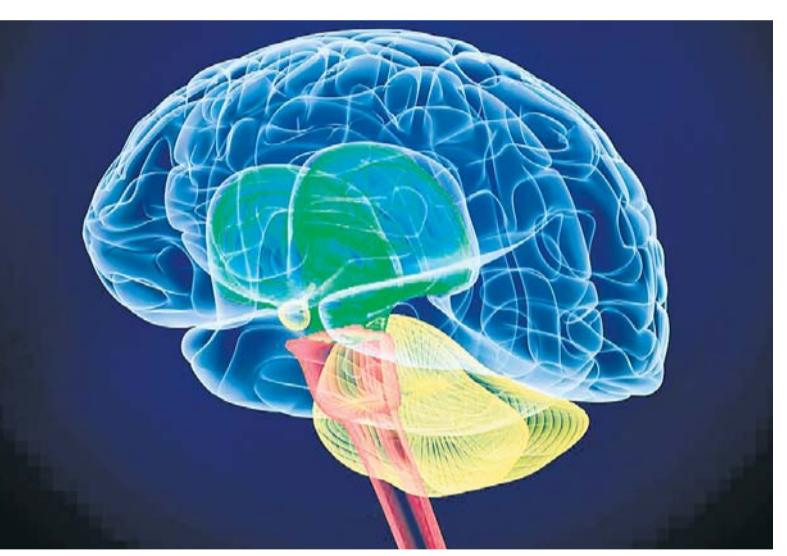
The new method, which can be easily replicated by other labs, will enable researchers to more precisely study forms of *hypoxia* in the brain, such as the denial of oxygen to the brain that occurs during a stroke or heart attack. The new research tool is already providing insight into why a sedentary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

"This research demonstrates that we can monitor changes in oxygen concentration continuously and in 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 Copenhagen.

"This provides us 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 deficits."

The new method employs *luminescent proteins*, chemical cousins of the bioluminescent proteins, found 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 oxygen, which is believed to increase in models of Alzheimer's disease. "The door is now open to study a range of diseases 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.

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



heart attack. But what happens when very small parts of the brain are denied oxygen for brief periods?

This question was not even asked by researchers until the team in the Nedergaard lab began to look closely at the new recordings. While monitoring the mice, the researchers observed that specific tiny areas of the brain would go dark, sometimes for minutes, meaning being cut off.

Oxygen is circulated throughout the brain via a vast network of arteries and smaller capillaries, or microvessels, which permeate brain tissue. Through a series of experiments, the researchers were able to determine that oxygenated blood cells temporarily block microvessels and prevent the passage of oxygen carrying red blood cells. These areas, which the researchers named '*hypoxic pockets*', were more prevalent in the brains of mice during a resting state, compared to when the animals were active. Capillary stalling is what occurs when white blood cells temporarily block microvessels and prevent the passage of oxygen carrying red blood cells. The chemical reaction in this instance is enzyme-dependent, so, when there is the enzyme, the substrate and oxygen, the system starts to glow," says Beinlich.

While existing oxygen monitoring techniques provide information about 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 corresponds with the concentration of oxygen. When the enzyme encounters oxygen, the chemical reaction generates light.

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

