

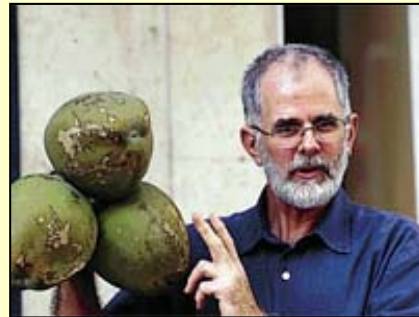
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people & places

## Caution!

| By Kavitha S Daniel/Illustration by Floyd Gonsalves | 14-11-2003

*He is a man with a mission - to alert peoples and societies to the potential of injuries that exists in our everyday life. From something so unexpected as a falling coconut (that can kill a man if it hits his head) to traffic mishaps to lifestyle choices, Dr Peter Barss of the UAE University believes that caution should be our motto. Interview by Kavitha S Daniel.*



Dr Peter Barss

Do you live in a safe world? Obviously, you think this question is stupid. Look around you, you will retort. The wars, the upheavals, the conflicts, the violence... are these what happen in a safe world? Ah, but we are not talking about these dangers.

We are talking of other kinds of dangers, dangers in which people don't necessarily have to drop bombs or hurl missiles or wield machetes in order for others to get killed or hurt. Making the world unsafe are the oldest perils - nature, progress, human callousness and the unpredictability of the elements.

Imagine this: you are having a picnic in a coconut grove. Sitting under a coconut tree, picnic basket overflowing with goodies, the sun softly falling on your

shoulders, you, your family and friends are filled with happiness that comes from a lazy weekend brunch. Suddenly, a fruit breaks free and falls on your head. Halfway through your cucumber and tomato sandwich, you are dead.

Imagine again. You are enjoying a nap in your posh apartment in a high-rise. Suddenly, you smell smoke. You feel the heat. Your house is on fire. You have no time to escape. You try to run to the front door but there is a furnace burning out there. You run back to your bedroom window and desperate and praying, hurl yourself out... If you are lucky you only break a few bones. If you are not... either way, your apartment should've had a sprinkler system.

These are examples of accidental deaths. Deaths due to injury. Unplanned. Unexpected. This world is full of such accidental deaths waiting to happen. Many of them can be prevented and that's precisely what Dr Peter Barss believes. He has devoted his entire life convincing societies and peoples to believe it too.

Currently Associate Professor in the Department of Community Medicine, Faculty of Medicine & Health Sciences in UAE University, Dr Barss has devoted much of his life probing the reasons behind the various injuries that a human being is subject to and how they can be prevented.

His book, *Injury Prevention: An International Perspective*, is a veritable tome on injuries, what triggers them and what society can do to make the world a safer place.

### **Designing a safer world**

If people truly believed that injuries could be averted, says Dr Barss, there would be serious attempts to make the environment safer. Swimming pools in clubs, homes and apartment buildings would have barriers to prevent accidental falls.

They, for instance, would be equipped with self-latching gates to prevent little children from falling into the water. (Many drowning deaths, for example, occur when kids accidentally fall into the pool, according to Dr Barss, an expert on drowning deaths and their prevention.)

Death is inevitable, eventually, but accidents are not. Road engineers, he says, should be more concerned about building roads that are safer rather than concentrate on ensuring that they enable the maximum number of vehicles to ply on them, he points out.

Builders and municipalities the world over should be more concerned about having sprinklers built into ceilings of homes rather than fuss over the aesthetic appeal of sunken levels in a living room, that are a lure for people to trip and break a bone or two.

It's this same "alertness" to safety that prompted lawsuits which led to major motor vehicle manufacturers to devise air bags, he says.

According to Dr Barss, there is danger lurking in many places in the way we build our cities and towns. "I believe most common injuries can be prevented by good planning. You have to take precautions because much of the environment around us is man-made, he says. Injuries can be avoided if you learn, like I did, that people die of similar injuries all around the world."

Dr Barss recently helped develop a research-based national drowning prevention programme across Canada with the Canadian Red Cross.

## How it all began

Though Dr Barss studied and trained as a doctor in Canada, USA and England, it was his stint as a medical superintendent in the remote Papua New Guinea which stirred in him an interest in injury prevention.

It was while living in this tropical paradise, around 20 years ago, that he stumbled upon a sphere of interest that would occupy much of his later life. It was something that would provide him a meaning to his life.

The sum of our experiences and events in our life prepare us for something, says Dr Barss, revealing a philosophical streak.

"We all have our sufferings and advantages. In my case, for instance, not coming from a wealthy family, I had to struggle to educate myself but I had the glorious opportunity of working in different countries. And, I had to make the best use of my experience to help others - that's our role in life, isn't it? - even as I hope others will do the same for me." (Dr Barss does admit with a wry smile that he's straying into philosophy here - do good and others will do good unto you).

Working as a surgeon, he witnessed deaths of young and sole wage earners of large families - deaths which he believes could have been easily avoided. "I wanted to get to the source of the issue," he says.

"I spent seven years, between 1978-1985, taking care of a population of nearly 130,000 living around mountains and islands in Papua New Guinea. It was an area recently opened up to the world. Even as I was working here, treating trauma care patients in a culture different to mine, I found a pattern of injuries very alien from Canada."

Apart from motorcycle crash victims and malaria patients, he also came across a number of people who had suffered environment-related injuries. For instance, being in a tropical island dotted with beautiful coconut trees, he came across quite a few people who had sustained injuries from falling coconut palms or after being hit on the head by a falling coconut.

"I have had patients with severe head and spinal cord injuries because they fell off a 30-metre-long coconut tree or were hit bang on the head by a coconut," he says. He even had to operate on blood clots in the brain stemming from injuries due to falling coconuts.

"Injuries due to falling coconuts may seem a ludicrous proposition to Westerners but it is not unusual in certain societies. People underestimate the force of a coconut hitting the head." A coconut can weigh a few kilogrammes, he continues, and the blow could be really serious.

The kinetic energy of a blow from a falling coconut can be up to a metric tonne, reveals Dr Barss, who wrote a landmark article on the deadly hazards posed by *Cocos nucifera* (or the tropical coconut palm) in *The Journal of Trauma* two decades ago. This article, in fact, bagged him the Ig Nobel Prize (see box).

It was not just tree-related injuries but also other unusual kinds of deaths which caught the academic attention of Dr Barss. He recalls a patient who was once brought into his clinic with a punctured lung.

Apparently, the man was fishing with a spear in lantern light in the night when a needlefish sprung out from the water and pierced him in the chest perforating his stomach and lung. "The villagers believed sorcery to be the cause of his death," he says, "but I was amazed by the nature of the cause and the injury."

Instead of just letting such "unusual" cases pass him by, Dr Barss started to research on needlefish trauma deaths but, perhaps not surprisingly, failed to find any published material on the subject.

"That's when, with the help of the medical students and the hospital staff in Papua New Guinea, I attempted a survey of patients with injuries caused by needlefish in the 20 provinces of the island," he recounts.

Soon, many more cases came to light, including one where a needlefish had pierced the eye of a victim, penetrated the brain and left the person paralysed. There was another where a needlefish had struck a girl in the neck and had injured her spinal cord, leaving her paralysed. These cases made the seemingly innocuous needlefish more dangerous than sharks! Dr Barss now had enough material to pen an article in the British Medical Journal on the topic.

But, he was not content to stop there. He continued to fish around for other unusual injuries - deaths from wild boar attacks, grass skirt burns... He was also busy working with health educators on the island, using the radio and other media to increase awareness on the hazards of the environment and ways to avoid injuries.

In fact, he also tried to inform people about the experiences of natives of neighbouring islands in containing environmental injuries. For instance, he explains, in Tahiti and Fiji, the local people pruned mango trees to make it less dangerous to climb. This meant less risk of people suffering serious injuries after falling from a tree while plucking mangoes.

Also, on some islands, the natives used locally-made equipment - like a long bamboo stick with a basket and a notch at one end - which could be used to pick mangoes. This way, a person did not have to climb a tall mango tree.

### Getting down to brass tacks

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Dr Barss had found the *raison d'être* in his life. Keen to specialise in injury prevention, he joined the John Hopkins School of Public Health & Injury Prevention and decided to concentrate on the occurrence of injuries in developing countries and poverty-stricken villages.



Shortly after, in the late 1980s, he, with help from some experts, sat down to write a book titled, *Injury Prevention: an international perspective*.

The project took him 10 years to complete. The amount of work that went into it was colossal, he admits. There were around 1,000 references and copious research material to plough through as the book dealt with the issue of injury prevention from a world perspective.

How did he go about it? "The first step to realise is that injuries can be prevented," he reiterates.

"As we continue to modernise, we need to make our environment around us safe and user-friendly. For example, fence children's play areas, design safe neighbourhoods and buildings, make school surroundings safe..."

The major focus of the book, published in 1998, rests on three basic elements to prevent injuries around us. First: limit the "personal risk factors" by taking care of oneself. In other words, become resistant to injury with regular exercise to strengthen the bones and body.

Second: people need to become accustomed to using safety equipment, like airbags or child safety seats in cars, instead of turning fatalistic about injuries.

Third, a crucial issue of injury prevention is to be aware of environment-related injuries by creating safe homes and buildings.

For example, in the Gulf region, natural hazards in the environment could result from heat injuries during summer or risks posed by multi-storey buildings, he says.

"It is essential to be cautious about safety in multi-storey buildings. Does your building have proper fire exits and water sprinklers in the ceiling in case of a fire? Are the windows high enough (so children cannot climb over)? Are they narrow enough so that children will not fall through? These are (some) questions to be raised."

His book also taps mental illnesses and suicide, and urges society to recognise the symptoms of people on the brink of a depression and attempt to support them.

### **It's about caring**

Dr Barss works on the premise that people care and want to care for people around them. "Society surely does not want to lose young productive people after investing in them as they grow up, do they?" he asks.

However, Dr Barss is at pains to reiterate his approach to this issue -that injury prevention is not emotional but "epidemiological". It's a study of what's going on among the people and takes into account the safety measures they adopt to prevent injuries. It's a topic, he claims, that is fast catching on in the world of science.

"People are starting to ask: in road crashes, who should be brought to book? Should not the road engineer also accept the responsibility of building unsafe roads?" he asks.

Further, to promote a rapidly popular thought of injury prevention in the UAE, Dr Barss has developed a new curriculum in injury epidemiology, injury prevention and trauma management for medical students in the university.

### **Positive to the end**

Living in a world of death, morbidity, injuries and morgues, Dr Barss might have ended up as the most negative person in the world. But, he reveals, he was impelled to embark on this long and committed sojourn, to achieve something special in his life.

In fact, Dr Barss is Mr Caution personified. During a coffee break midway through our interview, he advises against drinking too much black tea to avoid caffeine-induced irregularity of the heartbeat.

He suggests precautions to take in case the building you are residing in doesn't have a proper fire exit or sprinkler system: make knots in a strong length of rope, tether one end of it tightly to a fixed object in the room and drop the

other end out of the window. In the eventuality of a fire, you can use this as a means of escape.

"My kids used to get annoyed and advise me to stop thinking about morbidity and safety all the time. 'Enjoy yourself, Dad,' they used to tell me. But, there was a strange joy in taking from the sadness around me to help others. Truly, there's something good that always can be drawn from the bad around you. You could either be victimised or you could build your character by facing adversity. And, that's what I did - I challenged myself to make a difference."



Dr Barss got the Ig Nobel award in 2001 for his paper on injuries due to falling coconuts

When Canadian doctor Peter Barss published an article on the injuries that occur due to falling coconuts in *The Journal of Trauma*, it attracted the attention of the Ig Nobel Awards committee. The Ig Nobel, as the name suggests, is a spoof on the world-renowned Nobel Prize and 'salutes' scientific achievements that "cannot or should not be reproduced".

Instituted by an American mathematician Marc Abrahams and editor of the journal, *Annals of Improbable Research*, in Boston, the prize distribution ceremony is conducted in a tongue-in-cheek spirit... quite akin to 'honouring' somebody as the worst dressed person!

The founder and an Ig Nobel Board of Governors (made up of scientists and journalists) pick 10 recipients every year from nearly 5,000 nominations.

However, when Marc Abrahams contacted Dr Barss by e-mail a couple of years ago to ask if the doctor would accept the award, he did not blush.

"They always ask first. You have an option of saying 'no'," says Dr Barss.

Two years after having won the Ig Nobel award in Medicine, Dr Barss points out, "I was not insulted. It was something out of my ordinary routine and, I must admit, I enjoyed the entire process."

Winning the Ig Nobel entitled Dr Barss to lecture at MIT and Harvard and this made him happy. He continues, "There might be some serious scientists who might not like the idea but for me, it was not a dishonour."

The concept of falling coconuts causing injuries might have been unusual for the Ig Nobel committee but the subject was very important for Dr Barss.

He believes there is nothing remotely funny about people being felled by coconuts, or being exposed to dangers in a natural environment - like crocodiles swimming up to the shore and snatching people or children dying of grass skirt burns.

In his path-breaking paper in *The Journal of Trauma*, he mentioned that 2.5 per cent of trauma admissions in the hospital were from people struck by falling coconuts.

"Since mature coconut palms may have a height of up to 35 metres and an unhusked coconut may weigh one to four kg, the blow to the head could exceed a force of one metric ton," he wrote. "When a coconut weighing two kg falls (from a height of) 25 metres on a person's head, the impact velocity is 80 km per hour."

In his paper, he describes how two people with head injuries from coconuts required craniotomy while two others died instantly.

Dr Barss says he did not feel derided or undervalued. "I was in good company and this made me feel good. For example, there was the Ig Nobel Peace prizewinner, a building contractor from Lithuania. He had constructed a park filled with fallen statues of famous dictators.

"He wanted to remind the young people of Lithuania, before the statues were melted down, not to forget the unhappiness these men had wrought on the world. Actually, I'm quite proud to be associated with people such as this contractor," he says.

For Dr Barss, it was a break from the routine of surgeries and morgues. More importantly, he says, "the award gives his study a larger platform and makes people ruminant about living in beautiful natural environments that could pose a danger to them."