



# SafetySpeak

## Road & Traffic Safety Quarterly Newsletter

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### **From the editor's desk...**

Well, it is that time of the year to review what is going on around the world in terms of automotive safety. We reached a major milestone by establishing a fully incorporated company in India to pursue exciting automotive safety research in India. The company, JP Research, India Limited hopes to assist local safety organizations, institutions and automotive industry with transfer of knowledge/experience from the western world. We are excited to be part of the Indian automotive community.

I am equally pleased to announce that we are hosting our second automotive seminar in Pune, India on the 4<sup>th</sup> and 5<sup>th</sup> of December. Per last year attendees' request, we are focusing on Europe this time. The speakers are: Dr. Murray Mackay (a world renowned safety expert from Europe), Elaine Wodzin (pioneer in developing injury scaling in the U.S. and international communities), Jeya Padmanaban and Dr. Ali Hassan (an accident investigation expert from UK). Collectively, we bring in over 60 years of automotive safety experience. I am extremely delighted to conduct this seminar and I hope you can join us.

**- Jeya Padmanaban, President, JP Research Inc.**

## SIDE IMPACT SAFETY REQUIREMENT

U.S. Transportation Secretary Mary E. Peters recently announced new side impact safety requirements for all passenger vehicles. It is expected that the upgrade, developed by DOT's National Highway Traffic Safety Administration (NHTSA), will save hundreds of lives every year. The new standard requires auto manufacturers – for the first time ever – to provide head protection in side-impact crashes.

Side impact crashes account for 28 percent of all fatalities, the majority of which involve a brain injury. NHTSA estimates that the new requirements will save over 300 lives and prevent nearly 400 serious injuries per year. For the first time, a dummy representing a small adult female will be used in side-impact performance testing. A new and more technically advanced dummy representing an adult male of average height will also be used in crash testing.

While NHTSA does not require specific technologies to meet its new performance requirements, manufacturers likely would meet this upgraded rule with various types of head, chest and pelvis protection systems, such as side curtain air bags and thorax air bags. The new rule will require that manufacturers begin equipping all vehicles with improved side-impact protection that meets the federal standard, beginning with a phase-in schedule that starts in 2009.

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## SAFETY NEWS

### TEN SAFETY COMMANDMENTS – FROM VATICAN IN ROME

Ten Commandments issued from Vatican this month.

1. You shall not kill.
2. The road shall be for you a means of communion between people and not of mortal harm.
3. Courtesy, uprightness and prudence will help you deal with unforeseen events.
4. Be charitable and help your neighbour in need, especially victims of accidents.
5. Cars shall not be for you an expression of power and domination, and an occasion of sin.
6. Charitably convince the young and not so young not to drive when they are not in a fitting condition to do so.
7. Support the families of accident victims.
8. Bring guilty motorists and their victims

together, at the appropriate time, so that they can undergo the liberating experience of forgiveness.

9. On the road, protect the more vulnerable party.

10. Feel responsible toward others

Read More

<http://www.virtualriskmanager.net/main/news/news.php?newsid=3037>

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## NEW FRONT & BUMPER AIRBAG



**AUTOLIV DEVELOPED AND TESTED RECENTLY** two new air bags for SUVs, the front edge airbag and the Bumper airbag. The tests were conducted using crash dummies and computer simulations. The front edge airbag mitigates the injury risks to the pedestrian saving his head, chest and abdomen. Bumper airbag while reducing the injury risks to the pedestrian legs also found to be very effective in side crashes reducing the intrusion almost 40%. Side crash with a normal passenger car is very fatal because of the size mismatch. Now with this airbag lot of lives can be saved.

Read More

[HTTP://WWW.SAE.ORG/AUTOMAG/TECHNEWSLETTER/070717TESTSIM/02.HTM](http://www.sae.org/automag/technewsletter/070717TESTSIM/02.htm)

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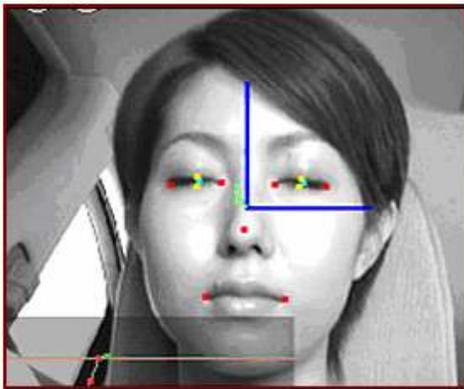
## CAN NEW BRAKE LIGHTS REDUCE NUMBER OF ACCIDENTS?

Researches at University of Toronto are developing a brake light system where the tail light expands or contracts during hard braking of leading vehicle. Research is based on the fact that driver's perception of the time gap between the vehicles depends upon the size of the image in the retina. Researchers then studied the possibility of driver's braking sooner if the retinal images are expanded quickly. A

preliminary study using a driving simulator confirmed that they did. Since the retinal images of the car can be manipulated in real world scenario they came up with the idea of changing the image of tail lights instead. System was then tested using a driving simulator to test the reactions of 40 male participants. People braked 100 – 300 milliseconds sooner. One of the researcher milgram that fraction of time may seem small, but given the millions of braking events every day, the difference could mean thousands of averted crashes per year

More on this story  
<http://www.news.utoronto.ca/bin6/070323-3022.asp>

**NEW ANTI-DRUNK DRIVING TECHNOLOGY**



Thousands of people around the world become the victim of road accidents when driving under the effect of Alcohol. Driver's concentration is diluted and all the body parts react slowly when inebriated though the confidence increases. There is nothing much could be done earlier apart from spreading awareness about the hazards of drunk driving and enforcing the legislation through checks on highways using breathalyzer. This will soon be history since the car themselves would decide weather to move with the drunk driver on board or not. The car will also have the ability to warn the drivers if they are about to doze off due to intoxication. Nissan's anti-drunk driving system uses a camera that is aimed at the driver's face and monitors the eyes, scanning for blinking patterns and drowsiness – symptoms of intoxication. If the sensors detect a driver that's ready to nod off behind the wheel, a digitized voice projected through the car's sound system states a warning message and displays a written warning on the car's LCD display. If the driver chooses to ignore the

warning, the driver's seatbelt will tug to get his or her attention.

More of the Story  
[HTTP://NEWS.EN.AUTOS.SYMPATICO.MSN.CA/ARTICLE.ASPX?CP-DOCUMENTID=5319820](http://news.en.autos.sympatico.msn.ca/article.aspx?CP-DOCUMENTID=5319820)

**JPR INDIA SEMINAR**

**DATE: DECEMBER 4TH/5TH 2007.**  
**CITY: PUNE, INDIA**  
**DETAILS TO FOLLOW.**

**PREGNANT WOMEN DRIVERS**

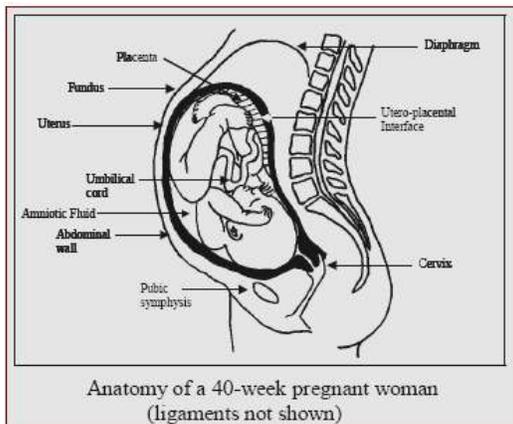
Automobile crashes are the single largest cause of deaths of pregnant women and the leading cause of traumatic fetal injury mortality in the United States. An estimated 130,000 women a year in the U.S. are in car crashes in the late stages of pregnancy, and about 30,000 are injured and 160 are killed, according to General Motors and 800 to 3200 fetuses are killed when the mother survives. Since the death and injury to the fetuses are not recorded, safety of unborn children is an area which is not properly documented. Research showed women who normally use seatbelts often stop in the late stages of pregnancy because they are uncomfortable, or because they are afraid the belt can hurt their child which is a wrong perception all together. Seat belt if worn properly and as advised by the doctor is found to be very helpful and life saving. Combination of Seat belt and the Air bag reduces the injury severity considerably both to the mother and the unborn baby. Below is the illustration showing how the belt should be worn during pregnancy.



## Common Injuries to Pregnant Women and her Child Due to Road Crash –

The unique ones are,

- Placental Abruption
- Uterine Rupture **OR** laceration
- Direct Fetal Injury



**Separated Placenta** is most common among all and in the case of accident, can be partially or completely detached causing abruption to oxygen and nutrients supply. The Placenta is a vascular organ (have ducts and vessels) which exchanges oxygen, nutrients and waste products between the mother and fetus via the umbilical cord. Term **“Uterine Rupture”** is used when the tearing of the uterus wall or womb wall where the fetus is housed happens due to road crash and can be fatal to both mother and the child. **Direct fetal Injury** can cause arm and leg injuries to the child, skull fracture or even death.

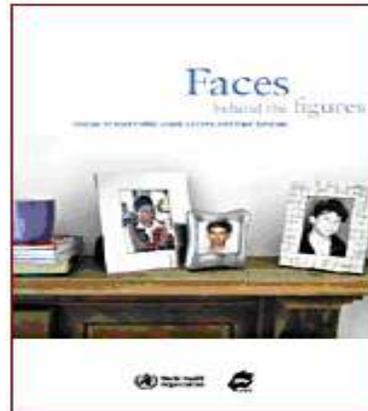
### What can **HELP - Seat Belts & Airbags? YES**

#### Research and Development –

Car manufacturers acknowledge the need for tests to determine how to protect a pregnant woman and also the fetus. General Motors Corporation designed and tested the physical crash-test dummy. The dummy is dubbed as Maternal Anthropomorphic Measurement Apparatus, version 2B, or MAMA-2B. The General Motor’s dummy, which is physical, not computerized, is also designed to assess the risk to the fetus in a crash.

## FACES BEHIND THE FIGURE

Voices of Road Traffic Crash Victims and their Families



This publication is joint work of WHO and Association for Safe International Road Travel. This book is the compilation of stories of the Crash victims, narrated by their family members or by themselves and tells us the emotional and psychological burden they carry for the rest of their lives. A crash occurs every four seconds and every forty eight minutes a loved one is killed in a road accident in some part of the world. Every year 1.26 million are killed and 50 million are injured and disabled because of the road crashes. Many of them have lost their sons, daughter, husband and wife. What makes this even more painful is the fact that road accident can easily be prevented. This book can be downloaded from below given WHO website link. One can be only thankful for not being one of those victims. The stories also stir up a sense of responsibility in oneself towards other road users.

More on the Story

[http://www.who.int/violence\\_injury\\_prevention/road\\_traffic/activities/faces/en/index.html](http://www.who.int/violence_injury_prevention/road_traffic/activities/faces/en/index.html)

### Crash Facts

- 20 Million to 50 Million people get injured or disabled every year due to road accidents
- Accidents on roads kill 1.2 million people every year or 3242 people on average die every day.
- Road Accidents is the 11<sup>th</sup> leading cause of deaths and accounts for 2.1% of all deaths globally.
- 90% of all road accident deaths occur in low-income and middle income countries.

- 73% of all road accident fatalities are male.
- Pedestrians, cyclists and two-wheelers are the most vulnerable road users in Low-income and middle-income nations.
- Every year road traffic crashes causes loss of US\$ 518 billion globally.
- Road traffic injuries are predicted to increase by 83% in low-income and middle income countries.

- **3rd International Road Safety Conference -**  
29 - 30 November 2007, Perth convention & Exhibition Centre, PERTH, AUSTRALIA  
<http://www.roadsafetyperth2007.com/index.html>
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### Upcoming National & International Conferences

- **The Way Ahead - 2007 Australasian Road Safety Research, Policing and Education Conference**  
17 - 19 OCTOBER 2007 - CROWN PROMENADE, MELBOURNE, Australia  
<http://www.roadsafetyconference2007.com.au/>
- **Road Safety on four Continents -**  
14 - 16 November 2007, Bangkok, Thailand  
[http://www.vti.se/templates/Page\\_3566.aspx](http://www.vti.se/templates/Page_3566.aspx)



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