



# **Aviation Human Factors Industry News March 18, 2008**

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## **Crossed wiring found in United Airlines enquiry**

A cross-connected wire may have caused a United Airlines
Airbus A320 jetliner to skid off the end of the runway at
Jackson Wyoming on Monday night, according to an accident
investigation update by the US National Transportation Safety
Board incident with similar circumstances that
occurred on October 9, 2007.

Another area of the investigation is the inoperability of one of the emergency evacuation slides. The slide at the front left door deployed when the door was opened during the evacuation but did not inflate. "The manufacturer of the slide will assist the NTSB in its investigation of the cause of the failure," said the board.



Information obtained from the flight data recorder (FDR) and the cockpit voice recorder (CVR) is being analyzed at the Safety Board's laboratory in Washington. Investigators are continuing to gather factual information in aircraft performance, human factors and other areas.

Read Aviation Record's earlier report of the incident here.

The board, which is continuing its investigation into the incident, said the plane came to rest 116 feet past the end of the runway and 140 feet to the right of the runway centerline.

"A heavy skid mark was found on the runway associated with the inboard tire of the left main landing gear. This tire was found deflated and showed wear consistent with a skid. Upon exiting the runway, both engines ingested snow and sustained internal damage. The aircraft itself was not substantially damaged," the board said. It said examination of the left main landing gear brakes revealed that the inboard and outboard wheel speed tachometer wires were cross-connected.



"Such a configuration would be likely to cause the antiskid system to use the

inboard wheel speed to control the outboard braking, and vice versa. In such a situation, it would be likely that when the inboard tire began to skid, the antiskid system would release the pressure on the outboard brake instead of the inboard brake."

Examination of maintenance records indicated that both main landing gear units were replaced on the incident airplane in early February 2008. The Safety Board is also investigating another United A-320



## Southwest puts three workers on leave. Reviews maintenance

Southwest Airlines on Tuesday promised to address any problems with administrative controls related to missed airline inspections and has hired an outside maintenance expert. Meanwhile, the FAA is investigating whether personal ties between a Southwest employee and a Dallas FAA supervisor played a role in the missed structural inspections. The airline has placed three employees on administrative leave.



Southwest Airlines has placed three employees on leave and is reviewing its maintenance program amid allegations it violated safety rules by flying 46 airplanes that hadn't received proper inspections for potentially dangerous fuselage cracks.

The Federal Aviation Administration proposed a \$10.2 million fine against the Dallas-based carrier last week, claiming it knowingly violated the regulations by flying passengers on the planes last March after discovering the lapse in inspections. Southwest responded that it followed the rules and planned to contest the penalty.

But Tuesday, the airline said its own internal investigation has now raised some concerns, and it is reconsidering its plan to appeal the fine.

"I am concerned with some of our findings as to our controls over procedures" when it comes to complying with certain safety rules, Gary Kelly, the airline's chief executive, said in a statement. "I have insisted that we have the appropriate maintenance organizational and governance structure in place to ensure that the right decisions are being made."



Brandy King, a spokeswoman, said the airline is "considering all our options regarding the fine, which include contesting it or reaching a settlement. That's still under review."

The Dallas-based airline and the FAA are the subjects of a Congressional investigation into the inspection lapse.

According to the FAA, the carrier reported the failure on March 15, 2007. The inspections were completed March 23. Under federal rules, the airplanes should have been grounded, according to the agency. Instead, they continued to fly passengers while awaiting inspections.

When examined, cracks were found on six planes. All of the jets were repaired.

The U.S. House Transportation and Infrastructure Committee has scheduled a hearing on the case for April 3. Southwest said the employees who have been placed on administrative leave are cooperating with the investigation. The airline has also hired a consultant to review the controls of its maintenance program, especially its compliance with safety directives.

The carrier said it was "fully engaged" with the FAA on an audit of its inspections, and that it "will investigate and address any deficiencies in its maintenance controls."

"We have been a safe company, I believe we are a safe company," Kelly said. "I am committed to making sure we become safer still."

## Comair to release safety records

Comair has given up its legal battle to withhold confidential reports that describe safety violations and at least four runway errors by its pilots.

The airline had contended that the reports need to be kept secret to encourage pilots and mechanics to report safety problems voluntarily.

But in the face of a request for sanctions from lawyers for the families of victims of Comair Flight 5191, the airline has surrendered the documents, known as ASAP reports, for the Aviation Safety Action Program.

Comair twice resisted orders to turn over the reports, and plaintiffs' lawyers had asked Judge Karl S. Forester to punish the airline by forcing it to acknowledge that its failure to take reasonable steps to correct serious safety problems was a substantial factor leading to the crash of Flight 5191 at Lexington's Blue Grass Airport on Aug. 27, 2006.



The commuter jet crashed on take off from the wrong runway, which was too short for the aircraft. Of the 50 people aboard, only the co-pilot survived. The National Transportation Safety Board ruled that pilot error was the principal cause of the crash.

Forester last week said the request for sanctions was moot because Comair had turned over the first batch of so-called ASAP reports on March 3, the day the sanctions were requested. The plaintiffs' liaison counsel, David Royce, said production of additional reports is ongoing.

A spokeswoman for the airline, Kate Marx, had previously said it was considering appealing orders to surrender the reports. The Air Line Pilots Association, the Regional Airline Association and the Air Transportation Association, which represents major carriers, all filed briefs saying that using the reports in litigation would inhibit self-reporting.

She could not be reached for comment today.

The trial of the lawsuits against the airline is set for Aug. 4, and lawyers have said the ASAP reports could be important in proving punitive damages.

## Reports: Italian high court upholds sentences for 5 convicted in 2001 Milan airport crash

The recovered remains of an SAS airliner are seen in foreground while firefighters are still working on the spot where the plane crashed at the Milan Linate airport in this Oct. 9, 2001 file photo. As global air traffic expands at record rates, experts warn that near misses on the ground at overcrowded airports are becoming one of the most serious safety concerns in civil aviation.



Italy's top criminal court on Wednesday upheld sentences for five aviation officials convicted of

manslaughter and negligence in the runway collision of two aircraft in 2001 that killed 118 people, news reports said.

The Court of Cassation upheld previous convictions by an appeals court in Milan and confirmed sentences ranging from three to 6 1/2 years in jail, the ANSA and Apcom news agencies reported.

The longest prison term was given to Sandro Gualano, who stepped down as the CEO of Italy's air traffic agency ENAV after the Oct. 8, 2001 crash between an SAS airliner and a small business plane at Milan's Linate airport, the agencies said.



The crash occurred on a foggy morning when the SAS MD-87, carrying 110 people and bound for Copenhagen, rolled down the tarmac for takeoff.

The jetliner collided with a business plane with four people on board, then careened into a baggage hangar in a second, flaming crash, killing four ground workers.

Investigators have described the accident as entirely avoidable, caused by a combination of human error and poorly followed safety procedures. The ground radar was out of operation.

Confusing runway signs were cited by investigators, and the control tower failed to ask the business plane's pilot to read back his instructions, authorities said.

Those killed included Italians, Swedes, Danes, Finns, Norwegians, a Romanian, a Briton, a South African and an American.

Wednesday's ruling also sentenced former ENAV director general Fabio Marzocca to four years and four months in jail. Three-year terms were also confirmed for Paolo Zacchetti — the controller on duty during the crash — and two other airport officials, ANSA reported.

The high court rejected appeals by the prosecution requesting new trials for other officials who had been cleared on appeal.

## Pilots, air-traffic controllers face English tests







Here's a good example why!

Pilots and air-traffic controllers around the world must now be able to speak basic English after new rules to improve safety came in to effect yesterday.

The International Civil Aviation Organization (ICAO) has introduced a mandatory English exam for hundreds of thousands of people worldwide who control aircraft at international airports.

It is hoped the rules will prevent accidents caused by poor communication, such as the death of 349 passengers in 1996 after a mid-air collision between a Saudi Arabian Airlines Boeing 747 and an Air Kazakhstan Ilyushin, because the pilots could not understand each other.



London's Telegraph reported that native English speakers will not have to prove their competence, but have been told by the Civil Aviation Authority to make sure they can be understood and refrain from the use of idioms, colloquialisms and other jargon.

ICAO officials said the organization did not expect perfect English, but the ability to handle emergency situations and ensure that pilots and control towers throughout the world understand each other.

David Learmount of Flight International magazine told the Telegraph the new English standard was an important step in improving air safety.

He said if anything "non-standard" happens it was not enough simply to know the technical words, the pilot had to be able to communicate the problem to air traffic controllers and understand them in return.

## FAA promises oversight upgrade after 'substandard parts' report

US FAA generally concurred with the findings of a Dept. of Transportation Inspector General report released two weeks ago that called for the agency to modernize its oversight system for aviation manufacturers to account for the increasing reliance on parts suppliers from disparate locations around the world.

While the agency said it is moving to implement recommendations made by the IG, it emphasized that the report had not identified



any "imminent safety issues." The IG claimed FAA's oversight system implemented in 2003 was "based on historical manufacturing business models in which the manufacturers maintain primary control over production of their aircraft. . . [the current FAA inspection] process is not adequate to determine the risk that a manufacturer [and its global network of suppliers] will produce substandard parts."

The report added that "some aircraft manufacturers had not designed effective oversight systems for their aircraft parts suppliers. . .neither manufacturers nor FAA inspectors have provided effective oversight of suppliers; this has allowed substandard parts to enter the aviation supply chain."

The IG further concluded that FAA inspections of supplier facilities "were too focused on specific tasks rather than overall quality systems," allowing "widespread deficiencies" to go undetected.



The IG wants FAA both to step up its audits of manufacturers and suppliers and to provide guidance for manufacturers such as Boeing on conducting on-site inspections of their suppliers. The agency needs to take action to "significantly enhance its surveillance of manufacturers' quality assurance systems for suppliers," the report stated.

Boeing said it is reviewing the IG report and "if necessary will make changes to our processes to ensure the highest level of safety for our products."

### Comair Crash Sole-Survivor Polehinke Looks Skyward

Mr. Polehinke, first officer, pilot flying and sole survivor of the August 2006 Comair CRJ-100 crash that killed the other 49 aboard at Lexington's Blue Grass Airport, is "determined to fly again," according to a report by The Associated Press. The accident took place after the crew of Flight 5191 was cleared for a 6 a.m. pre-sunup departure from the 7,000-foot lit Runway 22, but taxied past it and attempted departure



from the 3,500-foot unlit Runway 26. The aircraft hit the airport fence, a berm and trees before crashing 1,000 feet beyond the runway. Polehinke, then 44, was pulled from the wreckage by police officer Bryan Jared and airport officers John Sallee and James Maupin. Polehinke suffered multiple injuries that resulted in loss of his left leg and brain damage -- he reportedly has no memory of the crash or the incidents leading up to it. He is on medical leave with Comair and is being sued by relatives of some of the crash victims.

## Runway Red Lights -- Solution Or Stopgap?

It might seem like a sensible solution, especially at big airports with a complex array of taxiways and runways -- embed red lights into the runway pavement at the intersections. It's been tried at Dallas-Fort Worth and in San Diego, and reports are positive. But the technology is simply a "a stopgap measure," according to FAA Acting Administrator Bobby Sturgell.



"Runway status lights are one way to drive down incursions, but they're not the best way," he said this week, while visiting Los Angeles International Airport to announce that the lights will be installed there. At LAX, he says, the runways are simply too close together, and that layout needs to be addressed.

A recent report by the Office of Inspector General for the Transportation Department found that the status-light systems are effective and should be deployed at airports across the country.

The new lights at LAX should be up and running by early next year. The LAX system will be the first to include installations on high-speed exit taxiways.



## 3M eases sticky tasks

3M's Scotch-Weld adhesive 7246-2 B/A FST is aimed at simplifying many aircraft interior manufacturing tasks

Meeting safety requirements in all aspects of aerospace production and engineering demands high levels of expertise. Now, specialist technology company 3M has developed what it believes to be the world's first two-part structural epoxy adhesive to meet aerospace fire, smoke, and toxicity (FST) standards (when tested standalone) without the need for additional treatments or surface coatings.



The adhesive has been developed to meet the requirements of FAR 25.853 (a) flaming mode, JAR 25.853 (a) flaming mode, and ABD 0031 & AITM 2.0002A as defined by the U.S. flight authorities, European flight authorities, and Airbus, respectively.

Scotch-Weld adhesive 7246-2 B/A FST is aimed at simplifying many aircraft interior manufacturing tasks by allowing builders to complete assembly and FST compatibility operations in one step. The product will replace several types of conventional adhesive, simplifying stock requirements and improving productivity.

Scotch-Weld adhesive 7246-2 B/A FST is a room-temperature-curing structural two-part epoxy paste adhesive system. Its thixotropic, non-sag formulation makes it easy to apply without dripping or deformation, says 3M. The product has been created for many aerospace interior tasks, such as the corner splicing of honeycomb panels, insert bonding, and the bonding of tubular ducting. It allows completed assemblies to meet FST requirements without additional surface treatment.

Light tan in color to match conventional honeycomb skin materials, the material can be over-painted using the same surface coatings as the panels without leaving shadows.

"Our aerospace customers need to produce assemblies that meet extremely demanding FST standards," said John Lester, Key Account Manager at 3M. "Until now, those requirements have precluded them from taking advantage of modern, easy-to-use structural epoxy adhesives where the adhesive will form part of the outer surface of the finished product."

The adhesive has a typical work life of 45 min and reaches handling strength in 3-4 h under the same conditions.



The product is available in an EPX duo-pack cartridge or in bulk containers for hand mixing or use with automated mixing equipment. Compatible with most common aerospace interior substrates, including aluminum honeycomb, polycarbonate, glass/phenolic panels, polyetherimide, and polyphenylsulfone, Scotch-Weld adhesive 7246-2 B/A FST is resistant to damage by water, salt spray, jet fuel, and mineral oils.

## **A Passing**

#### **NASM Leader Don Lopez, 84, Dies**

Donald S. Lopez, 84, author, aviator, and deputy director of the Smithsonian's National Air and Space Museum (NASM) in Washington, D.C., died of a heart attack on March 3. Lopez joined the Smithsonian in 1972 as part of the team that planned the NASM, which opened in July 1976. "The nation has lost a true hero and the Smithsonian has lost a great leader," Smithsonian Institution acting Secretary Cristián Samper said in a news release on Wednesday. "Don Lopez was an American Ace fighter pilot, author, educator, and museum professional beloved by all who came in contact with



him." Lopez flew 101 missions in China, piloting Curtiss P-40s and North American P-51 Mustangs for the U.S. Air Force, and later flew North American F-86s in Korea.

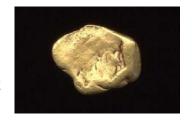
Among many other awards and honors, Lopez was heralded as one of the "living legends" at the Gathering of Mustangs and Legends at Rickenbacker Field in Columbus, Ohio, last year.

"Don's contribution to the museum cannot be overstated," museum director Gen. J.R. "Jack" Dailey said. "For 35 years, he was the guiding spirit, contributing his vast knowledge of aviation, exceptional leadership skills, unflagging enthusiasm, and a sense of humor that endeared him to all."

## **Midnight Shift Nugget**

## **Think Fast: Snack on This**

For speedier midnight shift thinking, which snack should you choose -- a ripe banana or a chunk of cheddar cheese?



Go for the banana. Why? High-carb/low-fat foods test better than low-carb/high-fat diets when it comes to giving you a mental edge.



#### **Combo Effect**

Both low-carb/high-fat and high-carb/low-fat diets appear to perk up people's moods, but when it comes to things like brain processing speeds, high-carb/low-fat foods beat others to the punch. Makes sense! Carbs are a critical source of the type of energy that brains need to perform. Fat, on the other hand (especially saturated fat), seems to bog down the mind.

#### **Go Bananas**

Need more reasons to eat bananas? Besides making your wits quicker, they'll also:

- Provide you with a healthy dose of vitamin B6, a nutrient credited with helping fend off Parkinson's disease
- Reduce your risk of kidney cancer
- Help keep your blood pressure steady because they're full of potassium.

It's 3 a.m. Do you know where your brain went? To fight midnight shift slumps, don't scavenge for the last sugar doughnut in the break room. Keep a jar of banana chips close by (the kind with no added sweeteners). They're a great crunchy-munchy pick-me-up.

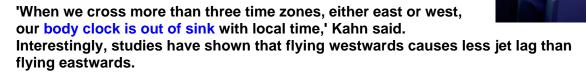


### How to minimize jet lag on your next business trip

#### Staying comfortable on a flight helps reduce jet lag

Any business traveler who has taken a flight across multiple time zones will be familiar with the symptoms of jet lag, which include fatigue, insomnia, irritability, stomach problems and general aches and pains. These symptoms can last for several days, wreaking havoc on your energy level and jeopardizing the success of your business trip.

Farrol Kahn, director of the UK's Aviation Health Institute, says travel across multiple time zones disrupts the body's circadian rhythms - more commonly known as our 24-hour-clock - which program us to be active during the day and sleepy at night.



Sleep disruption is another major contributor to jet lag. To help minimize any impact on your sleep, Kahn recommends adjusting your sleep patterns to your destination's time zone as early as possible.



'Go to bed each night either earlier or later a week before you fly, depending on whether you are flying east or west. If you are flying west, go to bed later every night and if you are flying east go to bed earlier,' he said.

#### Rest before you fly

Make sure you are well rested prior to travel. Avoid late nights and heavy drinking in the days leading up to flying. Excess alcohol and lack of sleep will make you more vulnerable to jet lag.

Being in a relaxed frame of mind will help you relax during your flight. Make sure you have packed everything you need and that your itinerary is in order. Also, arrive at the airport well ahead of time to help avoid any last-minute stress.

After boarding, set your watch to your destination's time and eat and sleep accordingly. Drink plenty of fluids - preferably sports drinks - to combat dehydration caused by the dry air and low pressure in aircraft. Kahn recommends oxygen supplements in dropper form which can increase the content of oxygen in a glass of water from seven parts per million to 200 parts per million.

Be careful about what you eat and drink. Avoid fatty foods and over-eating, and do not drink alcohol as it increases dehydration. Likewise, do not drink caffeinated beverages before, during, or just after the flight. Caffeine also causes dehydration and can disrupt sleeping schedules. What's more, caffeine can make you jumpy and intensify any travel anxiety you may be feeling.

#### Sleep as much as you can

Try to get as much sleep as you can during your flight. Wear comfortable clothing and remove your shoes to ease pressure on your feet. Make use of blindfolds, ear plugs, neck rests and blow-up pillows to help you nod off. Kahn recommends using noise canceling headphones to counter engine noise, which can reach 70-decibels in the cabin.

Also make sure to exercise to work your muscles and reduce swelling of legs and feet. Walk up and down the aisle, stand from time to time, and do small twisting and stretching exercises in your seat. If possible, get off the plane at stopovers to stretch out and take a walk.

Some long haul flights have facilities for taking a shower, and it is a good idea to make use of this perk. A shower will boost your circulation and loosen your muscles, making you more refreshed and relaxed.

Upon arrival, it is very important to expose yourself to daylight for as long as possible and stay up as late as you can. If you have to sleep during the day, sleep for one hour maximum, otherwise your body clock will revert back to your home time, Kahn said.



The sooner you can adapt to the local schedule, the faster your body will adjust. Therefore, if you arrive at noon local time (but 6am your time), eat lunch, not breakfast.

Finally, it is always wise to give yourself as much time as possible to adjust to the new time zone before an important meeting or event.

## **STRANGE BUT TRUE**

## 11 Weird Facts about Sleep

If you follow the news, you've probably seen the evidence linking lack of sleep with drowsy driving and road rage. You may know that lack of sleep depresses the immune system, leaving you more susceptible to disease and cancer.

Here are some lesser-known facts about sleep:



The Exxon Valdez:
A disaster caused by lack of sleep

- 1. It's actually impossible to tell when someone is asleep without medical tests. People cat-nap with their eyes open all the time.
- 2. There have been three notable disasters in which lack of sleep played a role:
  - The Exxon Valdez oil spill;
  - The space shuttle Challenger explosion; and
  - The Chernobyl nuclear power plant explosion.
- 3. Being exposed to noise at night can depress your immune system, even if you don't wake up.
- 4. Your body needs to cool off in order for you to sleep. If you have trouble dropping off, try dropping the thermostat a couple of degrees.
- 5. If you fall asleep in fewer than five minutes at night, you're sleep deprived. The optimal time is ten to 15 minutes.
- 6. Ten percent of people who snore suffer from sleep apnea, a condition which causes sufferers to stop breathing, sometimes hundreds of times per night. Sleep apnea also raises your risk of heart disease and stroke.
- 7. Ducks sleep with just half of their brains. The other half stays alert for predators.



- 8. Teens and children need about 10 hours of sleep per night. Adults between 25 and 55 should be getting about eight.
- 9. Diaries from the Victorian era show that in the years before electric lamps, adults got eight to ten hours of sleep per night, varying with the seasons.
- 10. The record for spending the longest time awake, according to the Guinness Book of World Records, is 276 hours, set by Toini Soimi of Finland in 1985. There are several claimants to the current record. In May 2007, Englishman Tony Wright awoke after a record-setting attempt, only to find that Guinness no longer accepts sleep deprivation attempts due to the possible health risks. Sleep deprivation is known to cause confusion, memory loss, extreme mood swings and irritability. In extreme cases it has been seen to lead to hallucinations and brain damage.
- 11. A new baby costs its parents between 400 and 750 hours of lost sleep in the first year.

Source: The National Sleep Project, Australia



### NITROGEN HOOKUP KILLS THREE WORKERS

Three employees equipped with respirators were preparing to paint a heat exchanger in a manufacturing plant. Their sandblasting work was almost finished. The portable air compressor used to supply breathing air to the sandblasters' hoods had already been sent on to another job, so the workers hooked their air supply hoses into the plant's air system without getting authorization from the plant management. Meanwhile, the plant operators, not knowing their air compressor was being used for breathing air, shut it down for scheduled maintenance.



This caused the nitrogen backup system to come into effect to maintain air pressure. One of the sandblasters died of asphyxiation from the nitrogen in his hood.

A fatality such as this points out the need for training and communication. Any employees working in confined spaces or atmospheres dangerous to life must be thoroughly trained in recognizing and avoiding all hazards. Nitrogen backup systems are often used for compressed air, so it's important to know the type of backup system before using any air supply for breathing purposes. Compressed air used to power equipment and tools is not safe for breathing. It may contain carbon monoxide, fuel vapors and other contaminants.



Similar fatalities have occurred when air respirator hoses have been inadvertently connected to nitrogen. Such incidents sometimes involve poor communication between contractors and plant management.

## AUDIO SAFETY TALKS! HARASSMENT HURTS



A cutting remark, a casual comment. Who could that hurt? And how? If your workers don't think harassment is a safety issue, or think your workplace harassment policy is just a "politically correct" nuisance, then they need to hear this safety talk. Harassment of all kinds causes resentment and injured feelings, distraction and stress. And when peoples' minds aren't on their jobs, people can get hurt. Harassment can also create a negative working environment, with the accompanying potential for violence.



To listen to the talk, click this link



## SAFETY COMMITTEE MEMBERS

Many people believe that the modern workplace has fallen victim to too many meetings that devour time and prevent people from doing the work they were hired to do. But one can't deny the importance of safety meetings – particularly those that bring



**Meaningful discussion drives safety** 

together workers from all levels of an organization to discuss and resolve workplace safety and health issues.

Whether safety committee members are dealing with issues such as introducing healthier food choices in the company cafeteria or addressing near misses on the shop floor, they exemplify teamwork at its finest.

#### Functions carried out by workplace safety and health committees include:

- Talking to workers in all departments about any safety or health concerns they have.
- Conducting workplace inspections to identify safety and health hazards.



- Putting hazards in writing and requesting that management address those issues.
- Helping employers evaluate injury and illness prevention programs.
- Dealing with patterns of near misses or injury incidents involving particular processes or equipment.
- Providing valuable training to members, which in turn can enhance their skills and ultimately, their careers.
- Promoting safety and health observances to keep fellow employees informed.
- Organizing fun events that promote health and fitness throughout an organization.
- Inviting anonymous employee input through a suggestion box whose contents are read monthly and raised during safety committee meetings.

Of course, it takes determination and commitment to ensure that a health and safety committee remains relevant and proactive.

## **GO FIGURE**

**Poison Prevention at Home** 

What does this number represent?

### \$26 billion

It's what poisonings cost the United States in 2000 in medical expenses. Here are a few other poisoning statistics for you:

75% of the total costs of poisoning injuries (\$19 billion) were incurred by males



A little dose of poison prevention for the family

577,886 emergency department visits in 2004 were due to unintentional poisonings

19,457 people died in 2003 by way of unintentional poisoning (second only to motor vehicle crashes as a cause of unintentional injury death that same year)

2 million unintentional poisoning or poison exposure cases were reported at poison control centers in 2004

To prevent poisonings in your home, here are some tips offered by the CDC (Centers for Disease Control and Prevention):



- 1. When giving or taking medicines, make sure you:
  - Follow directions on the label;
  - Read all warning labels;
  - Know if the medicine can be taken safely with other medicines or with alcohol; and
  - Turn on the light (if giving or taking medicines at night) to ensure you have the correct amount and the correct medicine.
- 2. Keep medicines in their original bottles or containers.
- 3. Monitor the use of any medicines prescribed for children and teenagers, including medicines for attention deficit disorder (ADD).
- 4. Keep medications in a safe place where they can only be reached by people who take or give them.

**Source: Centers for Disease Control and Prevention** 



## **PICTURE THIS!**

It's big and it's yellow, but it's not a school bus, or any kind of passenger vehicle. This young man is hitching a dangerous ride that could become a one-way ticket to Hurt City. What's he going to do if that machine hits a bump and jolts him loose? Because losing his grip will only be the first of an immediate series of painful problems



