

The United States Air Force Journal of Occupational,
Recreational and Driving Safety

Road & Rec

Volume 18, Number 4

Fall 2006



some things are universal...



Road & Rec

Volume 18, Number 4

Fall 2006

GEN T. MICHAEL MOSELEY
Chief of Staff, USAF

MAJ GEN STANLEY GORENC
Chief of Safety, USAF

GWENDOLYN F. DOOLEY
Chief, Air Force Safety Media, Education and Force
Development Division
DSN 246-4082

JERRY ROOD
Chief, Media Branch
DSN 246-0950

JOHN COCHRAN
Managing Editor
DSN 246-0983

PATRICIA RIDEOUT
Editorial Assistant
DSN 246-1983

FELICIA M. MORELAND
Electronic Design Director
DSN 246-5655

Web page address for *Road & Rec* magazine:
<http://afsafety.af.mil/SEMM/RRFIRST.SHTML>

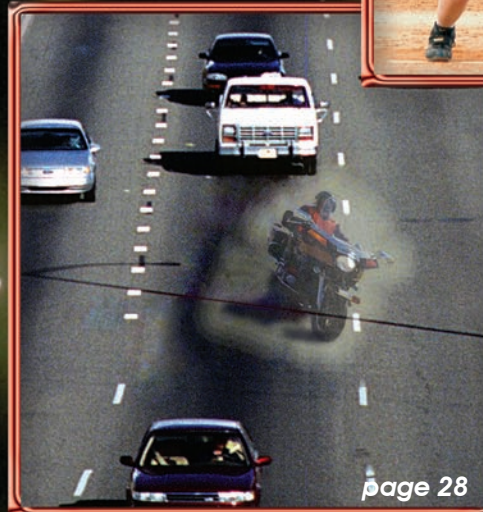
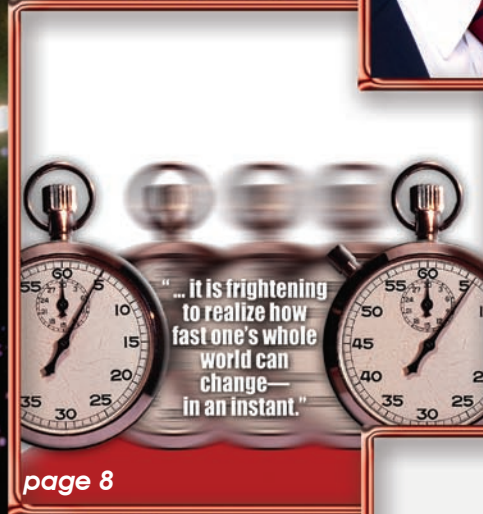
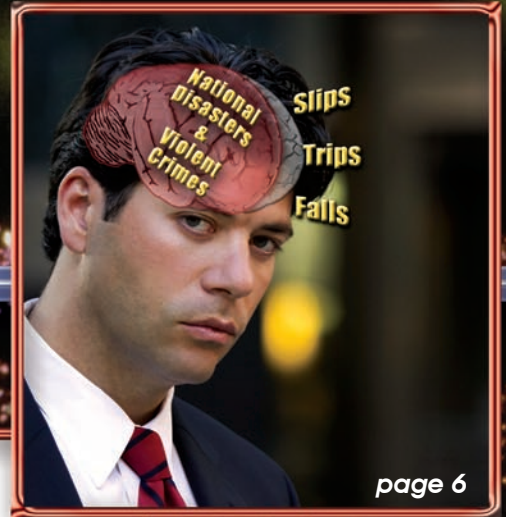
Commercial Prefix (505) 846-XXXX
E-Mail – john.cochran@kirtland.af.mil

DEPARTMENT OF THE AIR FORCE
CHIEF OF SAFETY, USAF

PURPOSE—The Air Force Safety Center publishes *Road & Rec* quarterly, as part of the program to prevent vehicle and other ground mishaps. Contents are not directive unless so stated. **REPRINTS**—Air Force units may reprint *Road & Rec* articles without further authorization. Other organizations must advise the Editor of the intended use before reprinting. This coordination will ensure that articles are accurate and contain the most current information. The appearance of specific commercial products, commodities or services is for information purposes only and does not imply Air Force endorsement. Some individuals in this publication are not Air Force members, and may not conform to Air Force appearance standards. **DISTRIBUTION**—One copy for each five Air Force members. To establish or change requirements, Air Force units must contact Mrs. Pat Rideout at HQ AFSC/SEMM, Voice—DSN 246-1983; Fax—DSN 246-0931; E-mail—Patricia.Rideout@kirtland.af.mil; or by mail to:

Road & Rec Magazine
HQ Air Force Safety Center
9700 G Avenue SE, Ste 283
Kirtland AFB, NM 87117-5670

Limited numbers of back issues are available from HQ AFSC/SEMM.



Features

- 6 What, Me Worry?
- 8 Make a Choice that Makes a Difference
- 12 Private Motor Vehicle (PMV) Safety Update ...
- 18 The 2006 Air Force Athletes of the Year
- 26 Buy Yourself a Little Time
- 28 Motorcycle Awareness for All of Us!

Departments

- 4 Bjorn, The Safety Viking
- 10 Storytelling: Spreading the Word About Safety
- 11 Safety Puzzle
- 14 SafetyLit
- 16 Poster
- 23 Safety Shorts
- 24 Bumbles, Fumbles & Stumbles
- 30 Snapshot on Safety

POSTAL INFORMATION—*Road & Rec* (ISSN 1055-7725) is published quarterly by HQ AFSC/SEMM, 9700 G Avenue SE, Kirtland AFB, NM 87117-5670. Periodicals postage paid at Albuquerque, NM, and additional mailing offices. **POSTMASTER:** Send address changes to *Road & Rec*, Attn: Editorial Assistant, HQ AFSC/SEMM, 9700 G Avenue SE, Kirtland AFB, NM 87117-5670.

CONTRIBUTIONS & FEEDBACK—*Road & Rec* welcomes reader contributions, comments and constructive criticism. The editor may revise contributed material to improve clarity, without altering the author's intended meaning.

To discuss your story idea, contact the managing editor by telephone, e-mail or fax.

Commercial telephone: (505) 846-0983
DSN 246-0983
E-Mail—john.cochran@kirtland.af.mil
24-hour fax: DSN 246-0931

STATEMENT OF OWNERSHIP, MANAGEMENT AND CIRCULATION

The United States Postal Service requires all publications publish a statement of ownership, management and circulation.

Title of Publication—*Road & Rec*
USPS Publication No.—10557725
Frequency of Issue—Quarterly

Location of Office of Publication—
HQ AFSC/SEMM
9700 G Avenue SE
Building 24499
Suite 286
Kirtland AFB NM 87117-5670

Publisher—U.S. Air Force
Editor—Ms. Gwendolyn F. Dooley
Total Number of Copies Printed—22,574
Number of Copies Distributed—22,324
Number of Copies Not Distributed—250
Total Copies Distributed and Not Distributed—22,574





Hear Ye and Fear Ye the Flounderings of Fall

ZACHARY WAKEFIELD
332 ECS/SCMM
Balad AB Iraq

Hello again, and welcome to my quarterly opportunity to spread wisdom-nuggets! If the biggest problem you had this summer was slushy-induced brain-freeze, good work! You advance to the next level! Now, as if by some cruel fate, time has placed yet another season of mayhem in our paths, and as we barrel headlong into this gauntlet of goofy weather and long weekends, it is important to keep a few things in mind. Those few things can be found in the paragraphs that follow. Supplementary visuals will also be provided, because that's the kind of quality you can expect from me.

Yard work, while appearing productive and relatively harmless, can do horrible things to your spine, especially during that ritualistic lawn-grooming phase of the fall when every leaf that hits the ground initiates a frenzy of raking. The inability to stand up straight later is a subtle reminder to lift with the legs, not with the back. This pain can

lead to ideas for lawn-rubble prevention, and the number of gravity-related injuries increases due to the difficulty of keeping one's footing on the branches while wielding the rake. It is much easier to rake them once they've fallen, so my advice to you is to wait. If you are lucky enough to live in an area where the season's colors invite hordes of elderly tourists, be extra careful on the roads, as every blind curve becomes a new and exciting opportunity to rear-end slow-moving leaf-peepers who can barely see over the steering wheel.

Halloween approaches, and as what once was a harmless children's holiday continues to grow in popularity among adults, the associated risks increase exponentially. You might not be able to resist parties that spring up during this period, as there are few other chances throughout the year to spot your coworkers in drag, but bear in mind, large gatherings of disguised persons with frothing flagons can get rather rowdy, as my experience has proven. If you were thinking about going as me, it's very flattering (and I assure you that beneath the beard, I am blushing deeply) but I should warn you that despite the intrigue, it is inadvisable to bring



THE DEPARTMENT OF DUMB THINGS PRESENTS:
A BAD IDEA IN THE MAKING

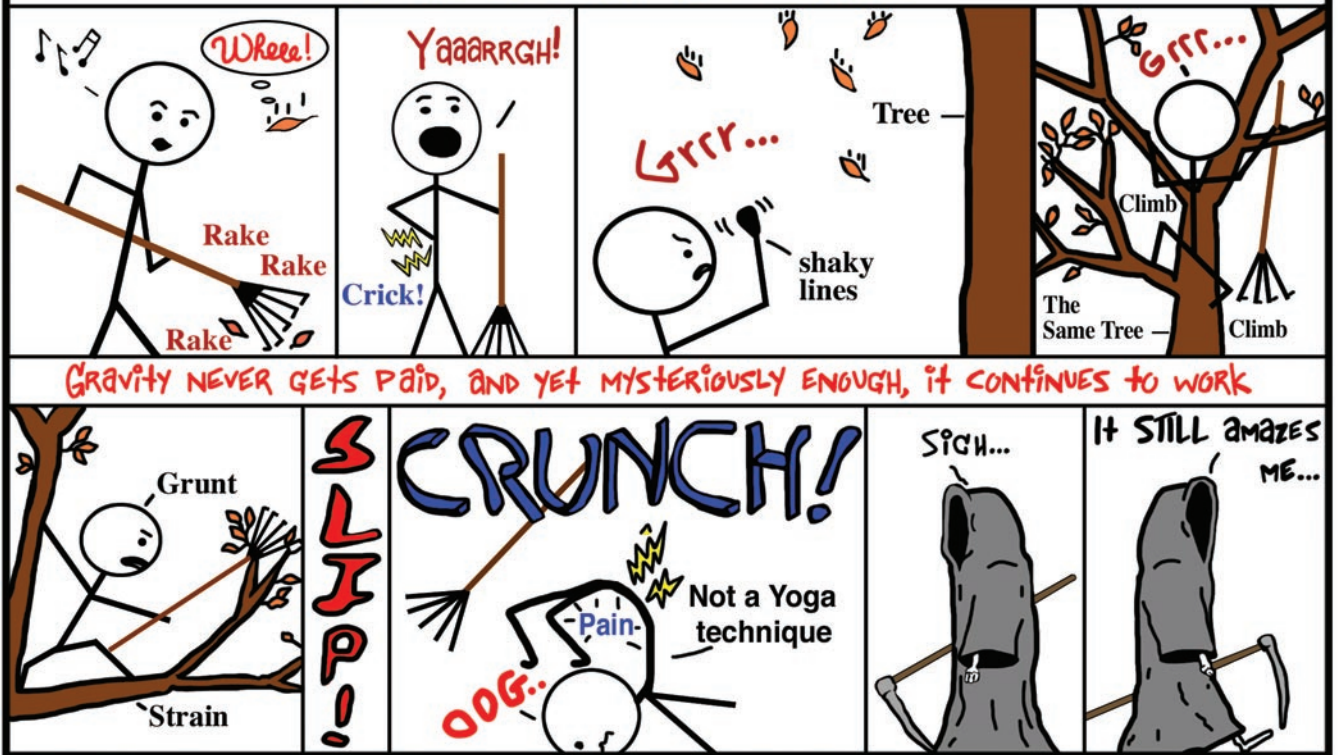


Illustration by Zachary Wakefield

a real sword to these festivities, as you may well imbibe too much mead and wind up being remembered as the guy with the sucking chest wound. There's nothing fun about that—ask anybody.

An individual's tendency toward procrastination is a little more evident in the fall, as the days start getting shorter, and those lists of things to do during the summer don't. Trying to cram all those trips and activities into one weekend can leave you plenty drowsy for the trip home, and as we all know, falling asleep behind the wheel is a good way to wake up in an urn. Imagine how boring that would be! If you spent the season playing video wiffle-ball in your basement and didn't get those trips in, learn from your mistakes and plan better next summer, for odds are good that another one will come around. Until it does, keep a stern vigil over your personal wholeness, watch out for those unfortunates who might not have been so lucky as to read this article, and most importantly:

Don't do dumb things!!

Sincerely,

*Bjorn, Your Friendly Neighborhood Safety Viking
Maker of Wooden Things
Breakfast Aficionado
Friend of the Porch Gnomes*



Slips

Trips

Falls

National Disasters & Violent Crimes

What, Me Worry?



Reprinted courtesy of *Industrial Safety & Hygiene News*

DAVE JOHNSON
Editor, *Industrial Safety & Hygiene News E-zine*

So, it turns out Americans need a reality check when it comes to realizing how dangerous work can be. Geez, who'd a thunk it? This likely is no revelation to you, or anyone responsible for instilling safe attitudes on the job.

After all, it's human nature we're wrestling with here. The National Safety Council's (NSC) recent survey asking 400 workers about their top safety concerns reminds us how easy it is to fool ourselves when it comes to judging safety risks.

What Does Worry Workers
Violent crime and natural disasters worry most workers more than unintentional injuries on and off the job, according to the survey. But as the NSC points out, violent crimes and natural disasters are far less common than unintended injuries occurring

at work, at home, on the road and in communities.

Consider these stats: According to the FBI, 16,137 Americans were murdered in 2004. That same year, 230 Americans died in hurricanes, tornadoes, extreme cold and severe or tropical storms, according to the NSC. In comparison, more than 110,000 lives were lost in 2004 to unintentional injuries, which also harmed about 23.2 million people seriously enough to cause permanent or temporary disability, according to the NSC.

Another misperception: Workers also feel more safe at home than on the job, according to the survey.

About 31 percent of respondents said they believe they are safer at home than in the workplace, and 62 percent said they feel equally safe at home and at work. Only five percent said they feel safer at work.

But in 2004, nearly 44,100 workers died as a result of injuries suffered off the job, compared to about 5,000 deaths on the job. Also according to the NSC, 6.8 million workers in the United States were disabled due to injuries suffered away from the job in 2004, compared to 3.7 million disabling injuries sustained in the workplace.

False Security

So, what distorts the risk perceptions of so many workers?

Two factors are gleaned from an article in the May-June 2006 issue of *American Scientist* that focuses on perceptions of recreational drug use. Author Robert S. Gable, an emeritus professor of psychology at Claremont Graduate University, studied the toxicity of recreational drugs and concludes alcohol ranks at the dangerous end of the toxicity spectrum. That's because a lethal dose of alcohol is typically 10 times the effective dose (which relaxes but does no harm). Heroin (injected intravenously) is lethal at five times its effective dose; marijuana (taken orally) is fatal at about 1,000 times the effective dose, according to the article.

(Here's how the calculations work: According to Gable, a 154-pound adult can achieve a "relaxed affability"—an effective

dose—from approximately 33 grams of alcohol. That's equivalent to two 12-ounce beers or two 1.5-ounce shots of vodka. But a person consuming 20 shots of vodka in a matter of minutes, on an empty stomach, risks a lethal reaction.)

Gable contends if alcohol were a newly formulated beverage, its high toxicity and addiction potential would prevent it from being marketed as a food or drug. But most people don't buy that. Which brings us back to risk perceptions.

The more frequently we experience an event without a negative outcome, the lower our level of perceived risk, explains Gable. About 75 percent of all adults in the U.S. enjoy a drink now and then, almost always without it turning into a life-threatening experience. About 300 people in the U.S. die from an alcohol overdose every year.

Similarly, most workers come and go from their jobs every day without experiencing unintended injuries. Repeated exposures without negative outcomes leads to the "What, me worry?" mindset.

Perceptions of risk are also shaped by our sense of control over a situation. Most people don't go into a bar worrying about "negative consequences" (other than anticipating a possible hangover) because they're confident they can handle their liquor. Likewise, most people believe they are safer at home than at work because they feel more in control of their own surroundings. In contrast, you can see that workers' biggest fears—of violent crime and natural disasters—are risks they perceive to have little control over.

One other influence shapes the risk perceptions noted in the NSC survey. Murders, robberies, hurricanes and twisters get a lot more press than falls at home or amputations on the job. Publicized risks, even if relatively rare, tend to make an impression on the minds of workers.

Meanwhile, safety pros continue to wrestle with human nature. Familiarity with work routines and home environments—plus that lack of publicity—indeed breed contempt for risks that warrant more respect. "What, me worry?" ■

Make a Choice that Makes a Difference

LARRY STULZ

445 AW/SE

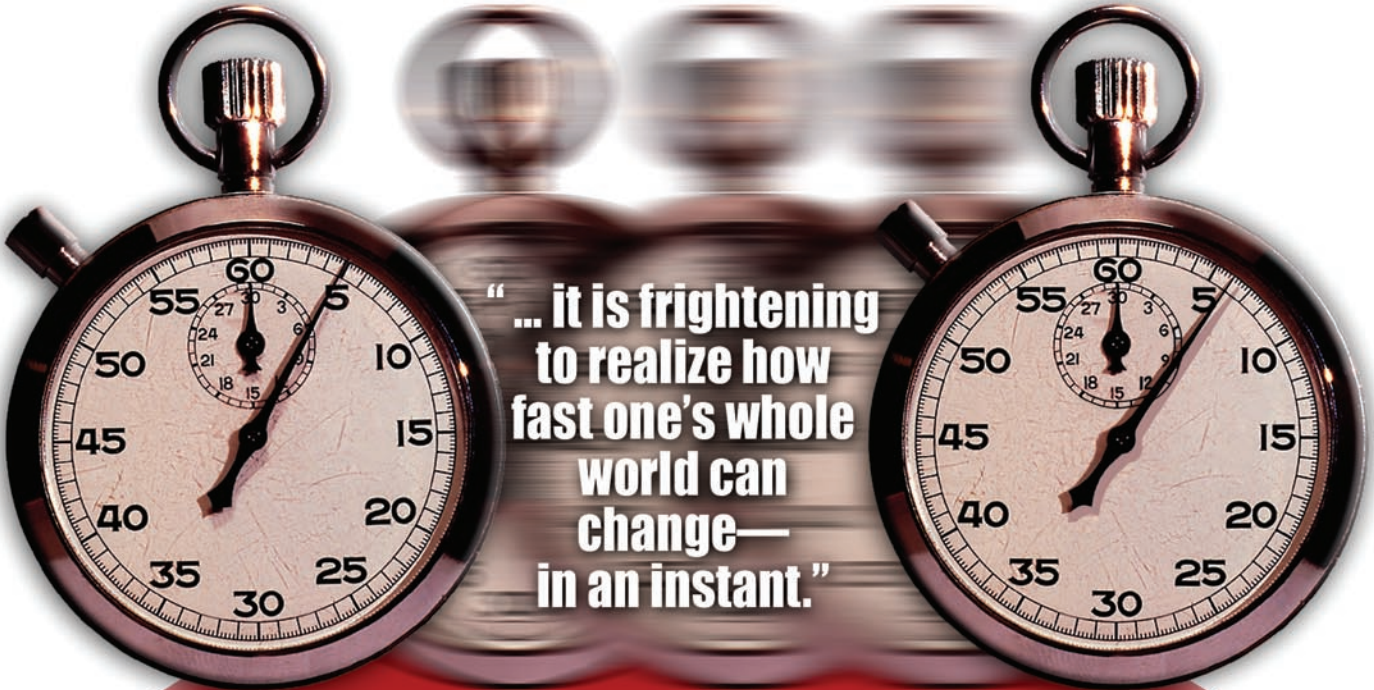
Wright-Patterson AFB OH

Every now and then, we all see things that make us stop and think about how precious life is, and how our whole world can change in an instant. My wife and I own two English Cocker Spaniels that are registered therapy dogs, and we visit local hospitals and nursing homes to help brighten the day of those who need all the love and attention they can get.

One weekend visit was one that I'll remember for a long time. In the room normally filled with senior citizens was a 30-something

man, sitting at a table with a woman. The man stood out from all the others by wearing a muscle shirt that revealed tattoos on both arms, from hands to shoulders. Mean tattoos. The lady at the table waved for us to bring the dogs over. As I neared, I noticed the man had huge rings on his fingers. Mean rings, emblazoned with skull and crossbones, knives, and guns. Once at the table, the lady introduced us to Ron. She said he was recovering from a brain injury suffered in a motorcycle mishap five months before.

Being the safety manager at work, I knew there was more to this story, and thought quickly of how I could learn more about this mishap without seeming too forward. "Did the motorcycle helmet malfunction during the mishap?" She said he wasn't wearing one.



**"... it is frightening
to realize how
fast one's whole
world can
change—
in an instant."**

Finally, Ron said something, while petting the dogs, that I couldn't understand at first, because his speech sounded like that of an intoxicated person. "I had dogs once," were his words. The woman at the table said that at the time of the mishap, he was not expected to live, but now she hoped he'd be able to recover to the point of being able to take care of himself.

We were then directed to a 30-something woman with a shaved head, who was rocking back and forth in her wheelchair, with a smile that would brighten anyone's day. Her body was curled into a partial fetal position, and I gently placed one of the dogs on her lap. Her face lit up with excitement and she tried her best to laugh. I was concerned that the dogs might be too lively for her, as I noticed a fresh surgical incision with staples that ran from one ear, across her head, to the other ear. My wife, who is a nurse, took over and made sure that the dogs were not hurting her. I stepped back and talked to one of the nursing assistants and asked about the lady's condition. I learned that the lady in the wheelchair was a typical "soccer mom" several months ago. She was in a vehicle mishap while not wearing a seatbelt, and suffered a brain injury. She will likely not recover. I learned that her two young children and husband had visited earlier that day, but that she doesn't recognize her family members.

I had a hard time concentrating for the rest of the day, as my thoughts often went back to those two people. I thought of the lifestyles they led, and their families that are now suffering and recovering, as much as they are. Thinking of their unfortunate examples, it is frightening to realize how fast one's whole world can change—in an instant.

In our society, it seems that those who are injured or have long recovery periods tend to disappear from life's normal day-to-day activities. We may forget about them, or not learn from their experiences. I can't take photos of them to use as examples of making a wrong choice. I am only left with the opportunity to tell the story of two people I met, whose worlds were changed in an instant, by not taking a second of time to make a choice that would have made a world of difference. ■



USE YOUR HEAD WEAR A HELMET



(800) 446-9227 • www.msf-usa.org

Storytelling: Spreading the Word About Safety

JOHN COCHRAN
Managing Editor

The purpose of *Road & Rec* is to provide information about ground safety. The most readable way to do that is for people to tell “There I Was” stories about their experiences. The idea behind the magazine is to give readers food for thought, and raise their awareness of safety in their lives, both on- and off- duty. Read about the misadventures presented in these pages, and think about how they relate to you. Our hope is that when readers encounter a risky situation, they’ll remember something similar that they’ve read about here, recall what happened to the storyteller, and then consider how best to proceed.

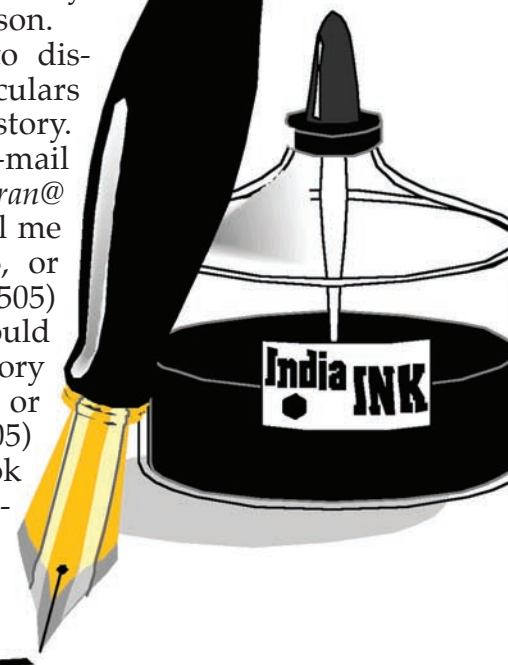
The magazine is no substitute for individual good judgment, common sense, and proper risk assessment and risk management, but it can be a worthwhile source of knowledge. It’s in that spirit that we ask our readers to become writers. Everybody has a story to tell that relates to safety. You don’t need to have lived through a near-death experience, either; your tale could be about how you prevented a mishap, by thinking clearly and doing the right thing.

The process of writing your story is simple—think about an event in your life that had safety implications, describe what happened, and talk about

what you learned from it. Usually, about 500 words is a good length, but it’s not a rule chiseled in stone. The right number of words is the number it takes to make your point. Pictures are a bonus, so if you have some imagery that ties into your story, all the better. We can use prints, slides, digital files, drawings and other kinds of graphic art.

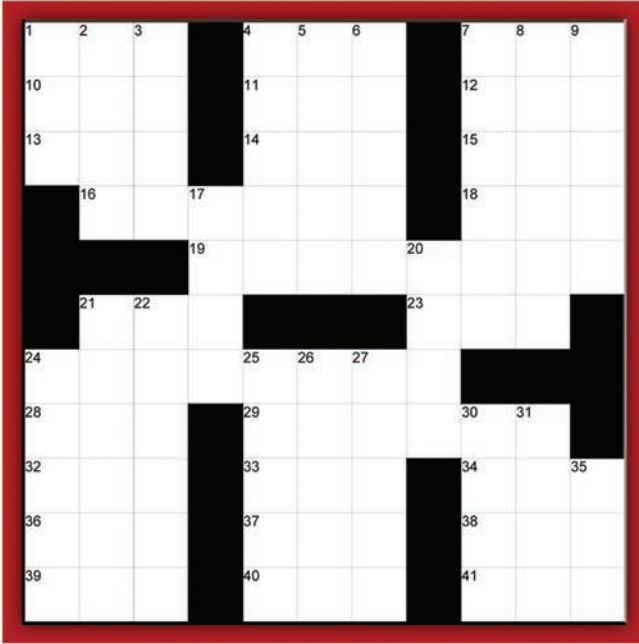
Concerned that you’re not Shakespeare? That’s OK—we can help polish your prose. What’s important is that you have something to say that might save someone else some pain, or grief. That testimony has real value for your fellow Airmen. By writing for the magazine, you can reach far more people than you ever could in person.

I’d be happy to discuss the particulars of your safety story. Here’s my e-mail address: john.cochran@kirtland.af.mil. Call me at DSN 246-0983, or at commercial (505) 846-0983. You could even fax your story to DSN 246-0931, or commercial (505) 846-0931. I look forward to hearing from you. ■



Household Safety

CAPT TONY WICKMAN
71 FTW/PA
Vance AFB OK



ACROSS

1. Sprocket
4. "Freddie _," U.S. government home loan mortgage org.
7. Child's game
10. Expert
11. Remains of fire
12. Necessity for household heating units
13. Yank's' opponent
14. USN equivalent to NCOIC
15. Item on food labels, in short
16. Sibling
18. Winter sport gear
19. Stairway safety feature
21. Communist leader Zedong
23. Model Carol
24. Safety item for smoke or CO
28. FormFlow replacement program, in short
29. Detain
32. Japanese sash
33. "Big Momma's House" actress Long
34. Roofing material
36. German "article"
37. Select
38. Flightless bird
39. Before, poetically
40. Compass point 112°30 east of due north
41. Coat hangar

DOWN

1. Lifesaving skill, in short
2. Lodes
3. Asian desert
4. Mediterranean island
5. Colorado resort
6. Simultaneous musical notes
7. Foot bone
8. Household "first" need
9. Object of a prolonged endeavor
17. This item can help prevent household falls
20. Scarce
21. Affiliate
22. This "proper" element can reduce accidents
24. Resistor
25. Lake transport
26. "Slips, __, Falls;" household dangers
27. Speak
30. Household stool used to reduce falls
31. Domesticate
35. Loose home item that can cause falls

answers on page 15

Private Motor Vehicle (PMV) Safety Update ...

SMSGT DOUG CROSBIE
HQ AFSC/SEGT

Last year, I assumed my post as the Air Force's Traffic Safety Superintendent. I had some concerns about the job—I wasn't sure if there was anything else we could do to reduce the numbers of those killed and injured while driving their own cars, trucks, and motorcycles. Safety theory teaches us that reducing exposure, through re-engineering or removing hazards, is more effective than education and awareness. Because as individuals, we are not yet willing to significantly give up our freedom of mobility (driving our own vehicles), there is not really much we can do to significantly reduce exposure when off duty, besides tightening our own individual risk assessments and adjusting our personal driving habits.

But these 12 months have reoriented my thinking. We can see a potential return from our education and awareness efforts. We are looking to refine our training, where possible, and aim it at specific targets within the Air Force. These include all younger drivers (ages 18-25), high-performance sports bike riders, off-duty dirt bike riders, and off-duty all-ter-

rain vehicle (ATV) riders. Only after we have exhausted all opportunities can we truly say our Airmen have reached the point of training saturation, where more training would accomplish little beyond what already has been done.

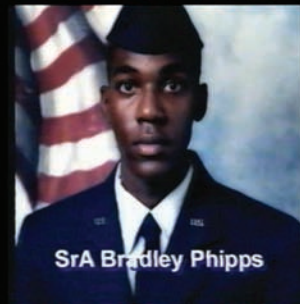
In order to better target our 18-25-year-old drivers, the Air Force Safety Center is updating the Air Force's suite of training courses. We have updated Course I, taught to most before they graduate from technical training, and issued a Supervisor Safety Traffic module to augment Supervisor Safety Training. We developed a new intermediate course (IIIA) that targets our most at-risk population, Airmen 18-25, and replaces ad hoc First-Term Airman Center Safety briefs with a standardized curriculum focusing on individual risk assessment and the development of countermeasures against the top 10 causes of fatal Air Force traffic mishaps. We are building a follow-on advanced course (IIIB) to refocus those Airmen one year after IIIA, targeting the complacency and overconfidence that often surfaces about that time. We are also retooling course V, to aim it at those Airmen who have experienced driving problems (poor decision making, illegal and/or dangerous driving habits, etc.) and are told to attend by their commander, first sergeant, or supervisor. While focusing on driving improvement, we plan to take off the kid gloves and



A1C Kerry Daley



Amn Sully Crosby



SrA Bradley Phipps

Targeted Traffic Safety Education

tell these folks exactly what to expect if things don't change.

We are partnering with Air Mobility Command to develop a sports bike course tailored for Airmen who may not be familiar with the characteristics, capabilities, and demands of these popular motorcycles. A team of sports bike experts, instructors, and sports bike racers are building the prototype. This should be a fun and challenging course for students; a chance to get the real skinny on what sports bike riding is all about, enhance skills, erase misconceptions, and correct the tendency to underestimate these proportionally more powerful machines.

Sports bike mishaps are a lethal problem, but can you guess what the number three and four causes of off-duty lost-day mishaps are? Dirt bike and ATV mishaps have that distinction. The Air Force Safety Center is funding tests at four bases: Eielson AFB, Luke AFB, Holloman AFB, and Nellis AFB. The tests explore different ways to provide hands-on training to off-duty riders. We want to see what method of training works best ... which are most effective and efficient. We'll share the results when they are in.

Finally, through our participation in the Joint Defense Safety Oversight Council Private Motor Vehicle Task Force, the military services are funding the development of a new Driver-Behavior Assessment Tool. When

finished, this tool should be able to identify those high-risk individuals who may need more intense types of training to overcome dangerous driving tendencies. This may sound a little far-fetched, but the concept has worked with high school populations, so we are developing a more complex tool based upon the unique risk-taking behavior of young military drivers. We can't afford intensive hands-on training (simulators and on-the-road training) for everyone, so wouldn't it be beneficial to have a way to identify those most at-risk before the mishap occurs?

I think we need to explore targeted approaches to training before we can really say our Airmen are training-saturated. Because there is little we can do to significantly reduce exposure (time on the road), we must be able to say that we're doing all we can. ■

Editor's Note: The Airmen in these photos lost their lives in preventable vehicle mishaps. Learn more about them in an Air Force Services Survivor Assistance video presentation titled "Before Their Time," available from the Defense Automated Visual Information System/Defense Instructional Technology Information System: <http://dodimagery.afis.osd.mil/davis/>. The 18-minute video is product number 614380, and is available free to Department of Defense components.





SAFETY RESEARCH UPDATE

The following information is courtesy of *SafetyLit*, a service of the San Diego State University Graduate School of Public Health. *SafetyLit* summarizes copyrighted reports on safety research. *SafetyLit* staff and volunteers regularly examine more than 300 journals and scores of reports from government agencies and organizations. We've included these summaries in *Road & Rec* for their interest to the Air Force community. For more, go to this link: www.safetylit.org.

Aggressive Traffic Enforcement Prevents Injuries

To investigate whether an aggressive program of enforcing traffic laws could reduce motor vehicle crashes (MVCs), injury collisions, overall fatalities, and fatalities related to speed, and decrease injury severity in crash victims treated at the trauma center, the city of Fresno, Calif., added patrol officers to begin vigorously enforcing traffic laws. Researchers collected data on citations, collisions, fatal collisions, and fatalities related to speed, as well as injury severity from the trauma registry, for the year before program onset (2002), during the first year (2003), and after full implementation (2004). Aggressive traffic enforcement increased citations issued, and decreased MVCs, crash fatalities, fatalities related to speed, and injury severity. This is a simple, easily implemented injury-prevention program with immediate benefit.

(Source: Davis JW, Benmink LD, Pepper DR, Parks SN, Lemaster DM, Townsend RN. *J Trauma* 2006; 60(5): 972-7. Copyright © 2006, Lippincott Williams and Wilkins.)

ATV Reg Enforcement & Awareness: Enough to Reduce Injuries?

Researchers studied injuries seen in a regional pediatric trauma center that were related to all-terrain vehicles. From 2001 to 2004, 50 ATV-related injuries requiring hospital admission were identified. The annual incidence had increased 2.5-fold from 2001 (eight admissions) to 2004 (20 admissions). The ages ranged from 3 to 17 years

(median, 13 years), with equal sex distribution. Fifty-four percent of admissions were traumatic brain injuries, 28 percent had orthopedic injuries, 14 percent with facial fractures, and four percent with abdominal injuries. **Eighty-four percent of patients did not wear a helmet.** Both the incidence and severity of ATV-related injuries are increasing. There is a lack of regulation enforcement and public awareness of the danger of ATV use in children. Efforts to ensure helmet use and limit operator age are urgently needed to reduce childhood ATV-related injuries.

(Source: Su W, Hui T, Shaw K. *J Pediatr Surg* 2006; 41(5): 931-4. Copyright © 2006, Elsevier Publishing.)

Wear Your Seat Belt and Don't Drink and Drive

Scientists estimated the contributions of the following five risk factors to changes in U.S. traffic crash mortality:

- (1) alcohol use by drivers and pedestrians,
- (2) not wearing a seat belt,
- (3) lack of an air bag,
- (4) not wearing a motorcycle helmet, and
- (5) not wearing a bicycle helmet.

There were 858,741 traffic deaths from 1982-2001. Estimated deaths attributed to each factor were:

- (1) alcohol use, 366,606;
- (2) not wearing a seat belt, 259,239;
- (3) lack of an air bag, 31,377;
- (4) no motorcycle helmet, 12,095;
- (5) no bicycle helmet, 10,552.

Over the 20 years, mortality rates attributed to each risk factor declined: alcohol by 53 percent; not wearing a seat belt by 49 percent; lack of an air bag by 17 percent; no motorcycle helmet by 74 percent; no bicycle helmet by 39 percent. There were 153,168 lives saved by decreased drinking and driving, 129,297 by increased use of seat belts, 4,305 by increased air bag prevalence, 6,475 by increased use of motorcycle helmets, and 239 by increased use of bicycle helmets. Decreased alcohol use and increased use of seat belts were associated with substantial reductions in crash mortality from 1982 through 2001. Increased presence of air bags, motorcycle helmets, and bicycle helmets

were associated with smaller reductions.

(Source: Cummings P, Rivara FP, Olson CM, Smith KM. *Inj Prev* 2006; 12(3): 148-54. Copyright © 2006, BMJ Publishing Group.)

Coffee, Naps and Highway Driving

Sleep-related accidents often involve healthy young persons who are driving at night. Coffee and napping restore alertness, but no study has compared their effects on real nighttime driving performances. Researchers tested the effects of 125 mL of coffee (half a cup) containing 200 mg of caffeine, placebo (decaffeinated coffee containing 15 mg of caffeine), or a 30-minute nap (at 1 a.m.) in a car on nighttime driving performance. Twelve young men were tested in a sleep laboratory and on the open highway. Participants drove 200 km (125 miles) between 6:00 p.m. and 7:30 p.m. (daytime reference condition) or between 2:00 a.m. and 3:30 a.m. (coffee, decaffeinated coffee, or nap condition). After intervention, participants returned to the laboratory to sleep. Nighttime driving performance was similar to daytime performance for 75 percent of participants after coffee, for 66 percent after the nap and for only 13 percent after placebo. Sleep latencies and efficiency during sleep after nighttime driving were similar in the three conditions. Only one dose of coffee and one nap duration were tested. Effects may differ in other patient or age groups. Drinking coffee or napping at night statistically significantly reduces driving impairment, without altering subsequent sleep.

(Source: Philip P, Taillard J, Moore N, Delord S, Valtat C, Sagaspe P, Bioulac B. *Ann Intern Med* 2006; 144(11): 785-91. Copyright © 2006, American College of Physicians.)

Societal Costs of Underage Drinking

Despite minimum-purchase-age laws, young people regularly drink alcohol. This study esti-

mated the magnitude and costs of problems resulting from underage drinking by category—traffic crashes, violence, property crime, suicide, burns, drownings, fetal alcohol syndrome, high-risk sex, poisonings, psychoses, and dependency treatment—and compared those costs with associated alcohol sales. Previous studies did not break out costs of alcohol problems by age. Underage drinking accounted for at least 16 percent of alcohol sales in 2001. It led to 3,170 deaths and 2.6 million other harmful events. The estimated \$61.9 billion bill (relative SE = 18.5 percent) included \$5.4 billion in medical costs, \$14.9 billion in work loss and other resource costs, and \$41.6 billion in lost quality of life. Quality-of-life costs, which accounted for 67 percent of total costs, required challenging indirect measurement. Alcohol-attributable violence and traffic crashes dominated the costs. Leaving aside quality of life, the societal harm of \$1 per drink consumed by an underage drinker exceeded the average purchase price of \$0.90 or the associated \$0.10 in tax revenues. Recent attention has focused on problems resulting from youth use of illicit drugs and tobacco. In light of the associated substantial injuries, deaths, and high costs to society, youth drinking behaviors merit the same kind of serious attention.

(Source: Miller TR, Levy DT, Spicer RS, Taylor DM. *J Stud Alcohol* 2006; 67(4): 519-28. Copyright © 2006, Rutgers Center of Alcohol Studies.)

Economic Impact of Motorcycle Helmet Use

The economic impact of helmet use remains controversial. Previous studies of injured motorcyclists suggest a marginal inpatient hospital cost difference between helmeted and unhelmeted riders. The purpose of this study was to expand the economic analysis of motorcycle helmet use to the point of injury by including motorcycle crash patients who do not require hospital admission. Unhelmeted motorcyclists incurred charges of \$39,390 + \$1,436 per injury, whereas helmeted motorcyclists incurred charges of \$36,334 + \$1,232 per injury. Mathematical extrapolation derived a charge of \$12,353 per unhelmeted and \$8,735 per helmeted motorcyclist for every crash, with a difference of \$3,618 between helmeted and unhelmeted riders involved in a motorcycle crash. With a current estimate of 197,608 motorcycle crashes/year, in which 69,163 riders were unhelmeted, the differential healthcare economic burden between unhelmeted and helmeted motorcyclists is approximately \$250,231,734 per year. This finding underscores the need for improved legislation to improve motorcycle helmet use.

(Source: Eastridge BJ, Shafi S, Minei JP, Culica D, McConnel C, Gentilello L. *J Trauma* 2006; 60(5): 978-984. Copyright © 2006, Lippincott Williams and Wilkins.)





ELVIS is Alive!

New Fans All Shook Up On Planet Sagesal

THE BEST INVESTIGATIVE REPORTING ON THE PLANET!

The TATTLE Tabloid





Quiz: Which Celebs Are Aliens?



ALIENS SAY PPE SAVED THEIR LIVES !!! *Space suits credited with preventing agonizing deaths*

A spokesman for the squad of extraterrestrial space travelers who recently landed on Earth had high praise for the effectiveness of their safety gear.

"Everyone on the crew swears by our protective equipment. We wouldn't leave our home planet without it. There was this one time, near Nebulon V, when our Arquillian Battle Cruiser was struck by a deadly Corillian Death Ray. If we hadn't been wearing our Deflecto-suits, we'd have been cooked—literally," said Neila Gnieb, through a universal translating device he brought with him. "The safety gear we use helps to protect us in these strange places, where we don't know exactly what the conditions will be when we arrive," he said. Gnieb also said his group would be happy to share their advanced safety technology with the people of Earth, "If someone will take us to your leader."



Nostradamus predicted Alien Invasion!

Recreational Safety: The 2006 Air Force Male and Female Athletes of the Year

Editor's note: For this feature article, *Road & Rec* interviewed the 2006 Air Force Male and Female Athletes of the Year, Maj. Roger Sherman and Staff Sgt. Twyla Sears. See what they had to say about the safety issues in their sports.

Q: What is sport shooting?

The best way I can explain this sport is that it is like playing soccer with handguns. I'm a member of the Air Force Action Pistol Team, competing in Practical Pistol Shooting.

The sport is scenario-based, where competitors have to negotiate different courses of fire,

called "stages." Speed and accuracy of the run determine the shooter's score. The stages may be as simple as picking up the pistol and firing at three targets 10 yards away, or as complicated as engaging 15 targets on a 400-yard "jungle run," where the shooter engages targets out to 50 yards. Course designers spend quite a bit of time creating stages that will challenge the competitors to the fullest, while ensuring that there are no "tricks" that might allow competitors to make mistakes that might endanger themselves, or others. We shoot at paper and steel targets, which can be full-sized, partially obscured, moving,

2006 Air Force Male Athlete of the Year: Major Roger Sherman

Sport: Shooting
Duty Title: Course Director,
Counter Space Planning and Integration
National Security Space Institute
Unit: Air Force Space Command
Base: Peterson AFB CO





or stationary. In competition, I use a stainless steel SIG Sauer P226 9mm pistol, and I recently re-qualified “expert” on the Air Force Marksmanship course, with the standard Air Force-issue 9mm Beretta M9.

Q: How did you get involved in the sport, and how long have you participated in it?

I had read about the sport since the ‘80s, but never had the time or courage to give it a try. The thought of running while shooting handguns is exciting, but is a little more difficult in practice. So, almost six years ago, I finally got a job in the Air Force where I had some time off on the weekends, and decided to try the sport. I was instantly hooked. Running with guns is probably the most fun someone can have with his clothes on, at least in my opinion.

Q: What are the safety-related issues?

Safety is the number one concern in Action Shooting. As you can imagine, running with a loaded, full-power handgun is inherently dangerous. That’s why every competitor is assigned at least two range safety officers, who follow the competitor to ensure the competitor is “running” the stage safely. The basic rules are: “Don’t point the pistol at yourself or others, and keep your finger off the trigger when not engaging targets.” There’s no room for the “Lethal Weapon” or “Miami Vice” kind of Hollywood moves in this sport. While running a stage, proper form is to keep your finger off the trigger, point the muzzle up and away, clear obstacles cleanly, and then aim at the target quickly.

continued on next page

Q: What personal protective equipment do you use?

Hearing and eye protection are musts. I wear ear plugs under my “muffs,” to further protect what little hearing I have left. It’s also wise to wear a hat, to keep the glare out of your eyes, or to keep the water off your glasses when it’s raining. Also, there’s the standard kit to help you cope with the environment, including bug spray, sunscreen, and hot- and cold-weather gear.

Q: Have you ever been injured while participating?

I’ve never been injured in the sport. Practical shooting has a nearly perfect safety record, despite what people might think. I’ve had the typical strains, sprains, and pains associated with any sport. Practical shooting entails lots of standing around and waiting, and then when the time comes, the shooter must be explosive with his movements, as well as being fluid and precise. That’s why I do lots of stretching and standard physical training, to keep the injury issues at a minimum.

Q: How has your sport affected other areas of your life?

This sport has had quite an impact on my life. I’m sure if you talked to my wife, she would have some creative things to say about the impact on my family/home life. It is very exciting for me as a “normal” person to compete at a world-class level, against professional shooters who make their living shooting. I am extremely proud to be able to represent the Air Force at these shooting competitions, and am even more proud to represent the United States in international competitions. It is hard to describe the feeling one is overcome with, when walking behind the American flag at the opening ceremony of a World Championship—it’s quite uplifting.

Q: Is there anything else you want to add?

My wife, Miranda, and three-year-old son, Reid, are my biggest fans, and my



most important sources of strength. I couldn’t have gotten this far without their love and support. I’m also very grateful to my coworkers for taking up my slack while I was away from my primary job, competing. I was recently invited to compete in a made-for-TV shooting competition. Seven of the world’s best shooters were invited, and I was one of them. This two-episode competition was broadcast in July on the Outdoor Channel, on the “Shooting Gallery” series. I placed second, shocking quite a few people, as I was the only non-professional shooter in the group. The show’s producers also tried the Army/Air Force rivalry, but I beat the Army’s best in this match (Max Michel).

2006 Air Force Female Athlete of the Year: Staff Sergeant Twyla Sears

Sport: Softball
Duty Title: Group Communications Planner
Unit: 353rd Operations Support Squadron
Base: Kadena AB Japan



Q: How did you get involved in softball, and how long have you participated in it?

My father got me into the sport when I was four, and I've been playing for 28 years. I've been on the Air Force team in the past, and I'm going back this year.

Q: What are the safety-related issues?

There are quite a few safety-related issues, with the biggest one being hit by the ball. You can also jam/break fingers, break ankles or legs, lose teeth, and pull muscles. It all depends on how good you are, and a lot of luck.

Q: What personal protective equipment do you use?

I use a softball mitt, cleats and reflexes.

Q: Have you ever been injured while participating?

I've been injured a few times over the years. The worst has been a broken jaw. In 1994, I was a dependent, playing for the base team here at Kadena. I went to what was once

continued on next page



USAF photos by MSgt Marilyn C. Holliday

called the “Cinco de Mayo Tournament” in Korea. I was hit by a stray throw while running to first base. At the time, I didn’t know that I’d been hit by the ball. It went toward the fence and I ran for second. After I was convinced that I’d been hit, I went to the hospital. The X-rays said that it was broken in three spots on the left side. So they did a temporary wire job to keep my mouth shut, and I went back out to play three more games. After I got back to Kadena and went into surgery to get a metal plate, they found a fourth break on the right side. So they fixed what they could, and wired me back up. I was wired shut for eight weeks, and lost 25 pounds. I had a lot of swelling, and formed a hematoma while in surgery. They said I bled for about 15 minutes before they could get it stopped. I was yellow from my jaw to my waist for about four weeks from the bleeding. I still have a little sensitivity, but nothing that keeps me from doing my job or playing sports. It’s the luck of the draw. But injuries happen when you are competitive. No matter what you do in life, there are certain risks you take.

Q: Is there a way to protect players against that kind of injury?

Of course there is equipment to protect your head, but it decreases your ability to see everything going on. You are more likely to get hurt walking down the street than by a stray softball. You just have to be more observant to what’s going on around you. As always, use Operational Risk Management. No matter what you do in life, there are risks. You just take them as they come, and roll with it.

Q: Do you and your teammates have a pre-game warm-up to get ready?

Here at Kadena, it’s more on your own stretching, because not everyone needs the same areas stretched. At the higher levels, such as Air Force, we do minor stretching together to make sure we get all the high-injury areas, such as groin and hamstring. Then we have a few minutes to do personal stretching, to make sure we got everything. At all levels we warm up our arms by light throwing. As the arm gets loose, you throw harder and farther to get maximum coverage and less chance of injury.

Q: How do you train and condition yourself for your sport?

I eat what I consider right. Everyone is different, and what works for one may not work for others. I run at least three times a week, and walk long distances the other four. I do a lot of activities with my kids that work my upper body, instead of dull push-ups. It’s all about what works for you, not against you. Crunches and sit-ups are a definite must. My husband and I go to the softball field regularly, just to hit the ball around and keep up on the hand/eye coordination. Most of my exercise is done outdoors, with the family and the dog.

Q: How has your sport affected other areas of your life?

Playing softball keeps me in shape. It helps me to focus on team-building skills that I employ at work. You are only as strong as your weakest player/member.

Q: Is there anything else you want to add?

Before stepping on the field, players always make sure that their equipment is ready to go and that they are ready to play. You focus on what you’re trying to accomplish, and give it 150 percent at all times. I prefer team sports to individual ones. Your team is like a “family,” because everyone depends on each other to get the job done. Without “family” togetherness, it just won’t work. ■



Safety Shorts



Seat Belts Save Lives

Between 2000 and 2004, states with primary seatbelt enforcement laws (where police can stop drivers for not wearing seat belts) had 10.69 deaths per 100,000 population, while those without such laws had a rate of 13.13. Primary enforcement states had fatality rates of 1.03 deaths per million vehicle-miles traveled, compared with 1.21 in other states. In passenger cars, correctly buckling a seat belt reduces the risk of death to front-seat passengers by 45 percent, and cuts the risk of serious injury in half. For light trucks, such as pickups and SUVs, the numbers are even higher: a 60 percent reduction in the likelihood of death, and a 65 percent reduction in the likelihood of injury. In 2003, seat belts saved nearly 15,000 lives.

Source: National Safety Council and National Highway Traffic Safety Administration

Report: Millions of Americans Still Not Buckling Up

In 2005, the U.S. national seat belt use rate reached 82 percent—the highest ever recorded, but about 48 million Americans fail to wear seat belts regularly. Those least likely to buckle up include young males in rural areas, and those who drive pickup trucks.

Source: National Safety Council and National Highway Traffic Safety Administration

Electrical Hazards

Electrocution, arc flash, burns, fires and explosions are constant concerns for workers who use electrical equipment. Each year, an average of 3,600 disabling injuries and 4,000 non-disabling electrical-contact

injuries occur in the workplace. More than 2,000 workers receive treatment at burn centers for electrical burns in a year, and one person is fatally electrocuted at work every day.

Source: National Safety Council and National Fire Protection Association

U.S. Traffic Deaths: “A Preventable National Tragedy”

Former U.S. Secretary of Transportation Norman Y. Mineta recently called traffic deaths in this country “a preventable national tragedy,” and called on Americans to use seat belts, wear motorcycle helmets, and abstain from drinking and driving. In 2005, 43,200 people died on the nation’s highways—up from 42,636 in 2004. Fifty-five percent of vehicle occupants who died were unbelted. In addition, motorcyclist deaths rose to 4,315 in 2005, nearly eight percent over the previous year, and the eighth consecutive annual increase. Alcohol-related fatalities rose 1.7 percent from 2004 totals, to 16,972. Pedestrian deaths rose slightly, from 4,641 in 2004 to 4,674 in 2005.

Source: National Safety Council and National Highway Traffic Safety Administration

Drunk Drivers: Deadly Weekend Mornings

Historically, Saturdays and Sundays, from midnight to 3 a.m., are the deadliest three-hour periods, with more than 1,200 fatal vehicle crashes nationwide each day. Overall, 40 percent of all fatal crashes involve alcohol. For fatal crashes occurring from midnight to 3 a.m., 77 percent involve alcohol.

Source: National Highway Traffic Safety Administration

Bumbles & Fumbles & Stumbles

The following short articles are derived from actual Air Force Class C mishaps. Our intent is not to make light of anyone's pain, even if it is sometimes self-inflicted; it's the questionable decisions and behavior we're pointing out. This is just a different approach to getting people to read about safety. Check 'em out—you just might get a laugh, and learn something, too.

Artificial Rock Wall; Genuine Back Pain

Until the technology for experiencing virtual pain becomes available, we'll have to make do with the old-fashioned kind. Novice climber Rocky finds this out the hard way, during his first expedition to scale an indoor rock wall. For his orientation climb, Rocky's suited up in the harness and tethered with a safety rope, while his climbing buddy, who has a whole day's worth of experience, is on belay. After a couple of uneventful round trips, Rocky is gaining confidence in his Spider-man skills. What can possibly happen? Possibly, Rocky's buddy can lose his focus for a moment, letting too much slack build up in the safety line while Rocky rappels down the wall. This minor indiscretion allows Rocky an unrestrained free fall, all the way to what the mishap report calls "the lightly padded floor." After his abrupt introduction to the too-solid surface, Rocky can vouch for that statement. Then, with him a-layin' on the floor, at the base of Mount Never-rest, somebody calls for an ambulance. The ER docs diagnose Rocky with a compression fracture of the spine, admit him to the hospital, and then give him some time on quarters.



That Painful Burning Sensation

Not satisfied with the "fire-in-the-belly" effect of

alcohol, this thirsty thrill seeker wants his drink to actually be burning before he downs it. Seems harmless enough—ingesting an already-flaming liquid. An unsteady hand in this event can be problematic, as our subject discovers after splashing the burning booze about his hands, face and neck. Eventually, he's steady enough to douse the flames, but sustains second-degree burns in the meantime. This development leads to a hasty trip to the base ER, and then to a local burn unit, where he's treated and released.



Boyz Under The Hood

A few guys are doing some work on a car one night. You know how it is—pop the hood, start the engine, run it a while, observe the tell-tale sights, sounds, and smells, and then shut it off and turn some more wrenches. After an hour of this male bonding, the radiator cap blows off, spraying hot fluid onto one member of the pit crew. Another one hoses him down with water, and then they roll to the hospital for professional care. The unfortunate one gets airlifted to a burn treatment center for care of first- and second-degree burns on the face, neck, and upper body.



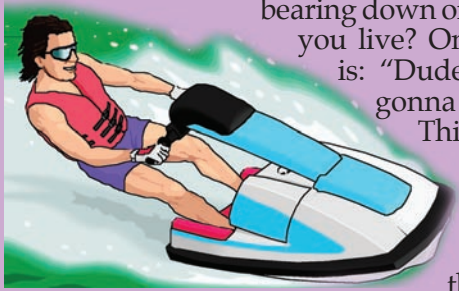
Fridge Follies

Refrigerators can be ornery creatures. They're unusually patient hunters, able to wait for years, sometimes, before lashing out at the unwary. Take Frosty, for example—he's crafty, and bears watching. He's been minding his business for a long time, just chillin' in the garage. Then somebody gets the bright idea to move him into the kitchen. Frosty can only be pushed so far. He balks at crossing the threshold. Trying to force the issue, the manhandler grabs Frosty by the nether regions, and gives a mighty yank. Frosty resists with everything he's got. In this match-up, Frosty proves to be stronger than the fleshy finagler, who has to go to the ER for treatment of his torn forearm tendon.



Hurricane Hijinks

What's the first thing you think of



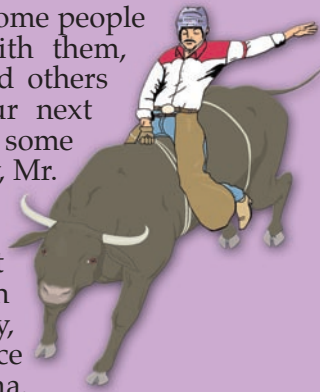
when you hear that a hurricane is bearing down on the place where you live? One guy's thought is: "Dude, the waves are gonna be awesome!"

This maritime-mishap-in-the-making takes place on a personal watercraft, with the rider happily

hopping along. Then, man and machine slam into a trough with enough force to break his ankle.

Bull 1, Rider 0

When it comes to bulls, some people fight them, some run with them, more people eat them, and others ride 'em. That's what our next subject is doing. The things some folks do for fun ... Anyway, Mr. Livestock Rider has been enjoying his hobby for many years (not without a break, though), and is on his second jaunt of the day, during bull-riding practice at his local rodeo arena.



Apparently, they have this crazy new thing called "gravity" there, because Mr. Rider starts sliding off his mount right after he and his bovine partner get out of the gate. Although the rest of the rider's body disengages from the beast, his hand gets caught in the rope. Meanwhile, the bull does his part to liven up the event—swiveling his horns around and striking Mr. Rider's melon, leaving a cut that will take several stitches to close. Mr. Rider gets a couple of days on quarters, to consider finding a new hobby.

Tickling, Eh? Laugh That Off, Dad

Playing with children can be a lot of fun. It can also be educational—such as when the adult learns just how hard-headed the offspring really is. This proud papa reaches out to tickle Junior, who reacts by snapping his head into Senior's nose. The resulting bloody nose leads to a spur-of-the-moment family outing to the nearest hospital. Sparing the gory details, let's just say that it's a remarkably short distance from the nose to the brain, and that important and sensitive anatomical



structures might be at risk. After a couple of days in the hospital for observation, Pops gets a few more days of rest at home, before the doc decides that

the patient will be OK without medical intervention.

The Right Tool

There's nothing like using the right tool for the job. Nothing like it in this incident, anyway. This tool-user is prying the brackets off a box with a knife, when the knife slips and sticks a solid landing, right into his arm. Tool man then gets a few stitches and a few days on quarters.



Time to Tidy Up

Using time efficiently is a great attribute. So is seeing opportunity and jumping right in, to get a job done. That's what our subject is doing early one morning, when he finds some extra time before work, and decides to clean his basement. He goes to pick up a weight plate, but it gets away and drops onto his bare foot, fracturing a dozen or so bones. At the local ER, he gets some stitches and pain meds. The next day, base docs give him 15 days on quarters.



Fashion Faux Pas

In the 1982 movie "An Officer And a Gentleman," Louis Gossett Jr., plays a Marine Corps drill instructor charged with molding civilians into Navy officers. In his first address to the recruits, he tells them, "I will use every means, fair and unfair, to trip you up." Maybe that's what this worker's shoes and slacks were thinking. She's walking down a stairway, with a hand on the rail, when suddenly, the heel of one shoe grabs on to the cuff of the other pant leg, and what happens next isn't pretty. She reaches for the rail with the other hand, loses her grip, twists halfway around, and then tumbles down 10 steps, striking her head on a stair and ending up with a concussion.



That's No Better Than A Poke in the Eye

Grown-up A is bending down to talk to toddler B, when, for some reason, the tot can't help but poke the adult in the eye, using index finger C. The next day, the more mature party takes the abraded eye to the base hospital for evaluation, and gets a day on quarters. ■





MSGT HAL BITTON
30th Medical Group VCNCO
Vandenberg AFB CA

Sometimes only a few milliseconds is enough time to make the difference between life and death. If I told you it would require an investment of five seconds every time you climb into a car to reserve the option to buy yourself a few milliseconds at some point in the future, you might think that was a poor return ratio. Factor the rest of your life into this scheme, however, and suddenly it's well worth the investment.

When you strap on a seat belt, you're reserving yourself an option to buy critical time ... a few milliseconds worth of critical time in the event of an accident. Seat belts work because they spread the energy of an impact out over area and time ... granted, not a lot of area, and certainly not a lot of time ... but usually enough.

Of the two aforementioned parameters (area and time), I think the concept that a seatbelt can spread force out over a substantial area of the body is relatively axiomatic, and therefore warrants no further discussion. What may not be nearly as intuitive, however, is that a seatbelt, in concert with the rest of the vehicle, can spread the force of an impact out over time. That's right, time ... Mr. Einstein's fourth dimension. Let's take a closer look at this aspect of a seat belt's protection. While you read the rest of this article, think about this proposition: "A seat belt protects you because

it attaches you to a part of the vehicle that is subject to less acceleration during most impacts."

First, let's establish a basic relationship between force, velocity, acceleration and time. In order to change an object's velocity (which is its speed and direction of travel), an application of force is required. Acceleration is the rate of change of an object's velocity. Apply more force, and you achieve a higher acceleration, and will reach a different velocity in less time than if you apply less force. Let's look at it like this: As the time allowed for an object (say a car traveling at 60 mph) to achieve a different velocity (lets say 0 mph) is reduced, the acceleration required to achieve that different velocity is increased. (If you want to think of it as deceleration because we're slowing down, that's fine, but it's actually acceleration in the opposite direction, or negative acceleration). Remember that more acceleration requires more force to be applied. Carried to the extreme, as time in the above scenario approaches zero, the force that must be applied approaches infinity.

So, how do we apply lots of force to a vehicle to give it lots of acceleration? Give it big horsepower? Give it massive ventilated four-wheel-disc brakes with racing-compound tires? Yes, I suppose you could, but let's quit trifling with the paltry stuff. Let's run it headlong into a bridge abutment at 60 mph. Now we're talking real acceleration and real force! (See the sidebar.)

This is where what I mentioned earlier, the "in

concert with the rest of the vehicle” part, comes into play. You see, a vehicle subject to the kind of force mentioned above no longer behaves like a solid object, but rather like a giant crash helmet ... deforming, bending, crushing, absorbing energy, and lowering the acceleration of the passenger compartment as it is impaled against the bridge abutment. The pertinent phenomenon here is that you, held fast by your seat belt, have taken much longer to go from 60 to zero than, say, your front bumper.

Of course, if you’re not belted in, all bets are off. You become a projectile, destined for a rendezvous with whatever solid object gets in your way, as you continue to hurdle forward in space while the passenger compartment around you slows down. Will it be the steering column? The dashboard? How about the windshield? Or

perhaps you’ll go through the windshield and experience firsthand the incredible acceleration just undergone by your bumper as you, too, slam into the bridge abutment. Granted, steering columns are “energy-absorbing” these days, and they have airbags in them, but these systems are not designed to be stand-alone. Without a seat belt to hold you in position, an air bag can seriously injure or even kill you as it inflates.

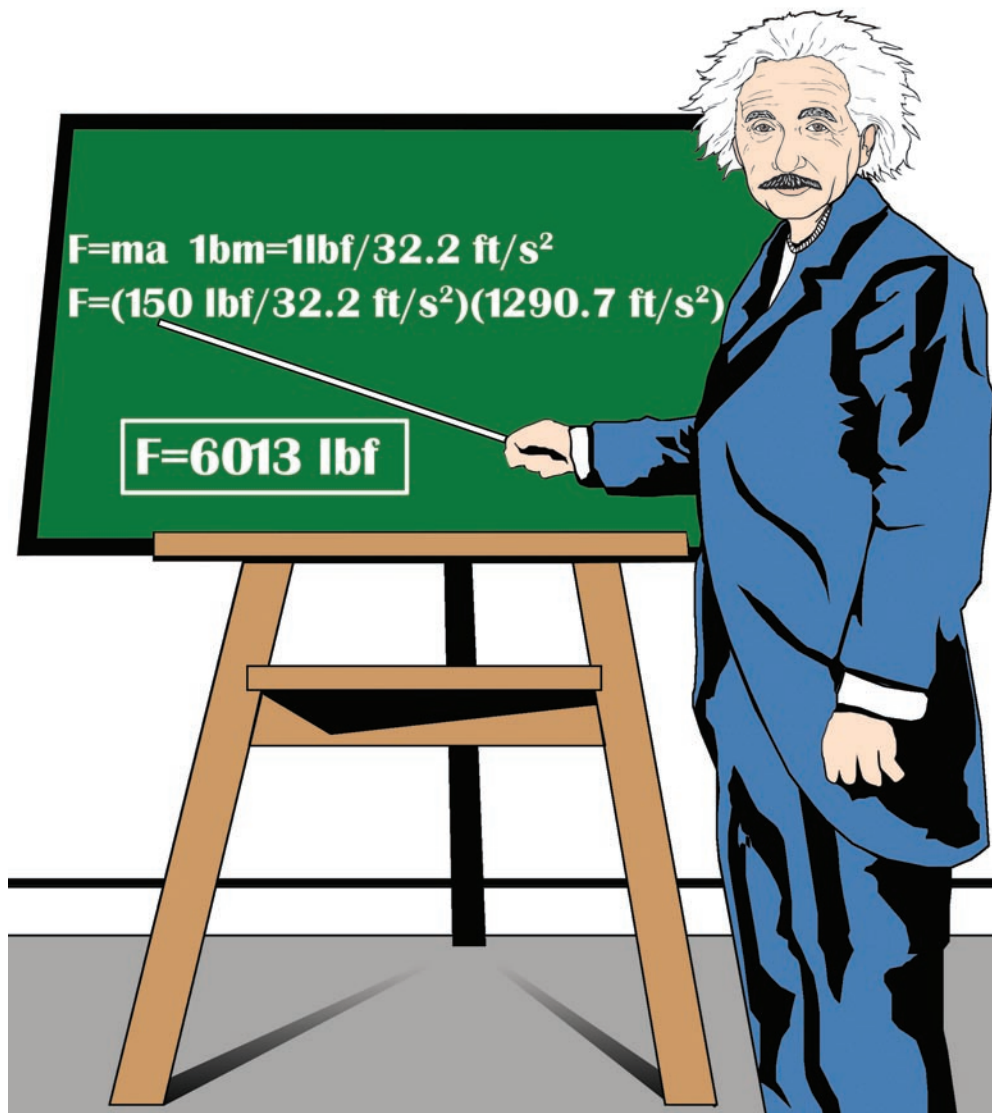
Bottom line ... when you’re belted in, the impact you feel in a collision is spread out over time ... reducing the acceleration and the force applied to you. True, a crash like this only takes a few violent, blinding milliseconds to play out, but every one of them is precious.

So, reserve yourself the option to buy a few milliseconds of this precious time ... BUCKLE UP! ■

PHYSICS OF A CRASH

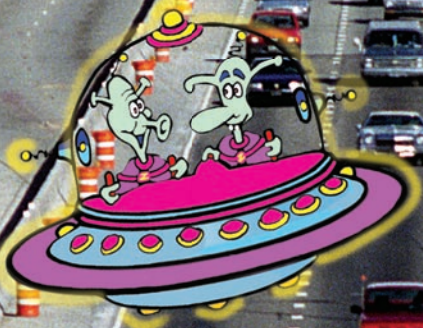
- If you’re allowed three feet to go from 60 mph to zero (the front of your car crushes three feet, and you’re strapped in), it takes you 68 milliseconds (thousandths of a second) to stop, and you will pull 40Gs. If you weigh 150 lbs. you will exert 6000 lbs. of force on your seatbelt. Remember this force is spread out over area, and would be about 42 psi of pressure exerted by the seatbelt (assuming 48 inches of belt are touching you (lap and shoulder), it’s three inches wide, and pressure is distributed evenly).

- If you’re only allowed an inch to do the same thing as above (say you’re not strapped in, and you hit a solid object, or better yet, pretend you’re a front bumper), it will take only about 1.8 milliseconds to stop, and you will pull 1453 Gs. Even if you slow down to 20 mph before impact, you still pull 484 Gs.



Motorcycle Awareness ... For All of Us!

ROD KRAUSE
5 BW/SEG
Minot AFB ND



During one of my recent rides to work, I came across what most fellow riders fear the most—the sudden “deer-in-the-headlights” stare from an oncoming motor-

ist who realizes that she just ran a stop sign (while talking on a cell phone and applying makeup at the same time).

Fortunately enough, even at my old age, I was able to put my Motorcycle Safety

Foundation Rider Coach skills to the test, and avoided what could have been a disastrous motorcycle mishap.

Most riders strongly feel it's the other driver's fault in most collisions with motorcyclists. This is a reason why organizations such as American Bikers Aiming Toward Education, the American Motorcycle Association, and other riders' rights organizations are fighting for increased penalties for motorists who violate our right-of-way.

A recent study conducted by the University of Southern California found that about 70 percent of motorcycle accidents involved a collision with another vehicle, usually a passenger automobile. It also found that in the multiple-vehicle accidents, the driver of the other vehicle violated the motorcycle's right-of-way and caused two-thirds of the accidents.

Motorcycle riders often get an unjustified reputation as being reckless risk-takers, who generally disobey traffic laws. This perception is unfounded. Statistics prove that most motorcycle accidents are not the fault of the motorcycle rider, but of other drivers.

These findings show that the motorcycle rider has unjustly received a bad reputation from the public, as well as from insurance companies that cover motorcycle riders. Motorcycles are inherently prone to accidents caused by other drivers because of their small size. Motorcycles easily fit into the blind spots of typical passenger automobiles. Most motorcycle riders are very good drivers, and keep an eye out for motorists who do not see them. This awareness of other drivers, however, does not prevent all accidents.

Drivers can help reduce crashes by paying close attention to the following tips.

Watch for motorcycles. Most drivers involved in a mishap with a rider say they never saw the motorcycle, or when they did, it was too late. Drivers should expect to see motorcycles at any time, and search aggressively for them. Remember that a motorcycle's headlight is on all the time—this helps you see riders during the day.

Also, a motorcycle can easily be hidden behind a car or truck, so it's important to check your mirrors and blind spots before merging or changing lanes, especially in heavy traffic. Also, look for a helmet above, tires below, or

a shadow alongside a vehicle that you can't see around. Make sure your view of the road is unobstructed, by removing items hanging from the rearview mirror. In some cases, the mirror is completely covered by items such as a mini-DVD player.

Motorcycles are smaller than most cars and sport utility vehicles, which can make it difficult to accurately determine the speed of a motorcycle. Always leave adequate room when entering the road. Motorcycles are entitled to the same full lane as other vehicles. While it is legal for motorcycles to ride side-by-side, it is illegal for any other vehicle to share a lane with a motorcycle. Be aware that riders will change position within their lane to see and be seen, to avoid surface hazards, and to prepare for a turn. Car drivers must never move into the same lane alongside a motorcycle.

For riders, never assume that you have been seen, and approach each intersection with great care. Choose a lane position that makes you most visible to any cars waiting to turn. Be aware of any drivers behind you who may not have time to stop if you have to brake suddenly. When approaching intersections, slow down, and cover your brakes and clutch. Avoid flashing your high beam, and make sure your turn signals aren't blinking—this can send other drivers the wrong message. Consider a short beep of your horn and try to make eye contact.

Although it is legal for motorcyclists to ride side-by-side, it is not advisable. Not only does it reduce your space cushion and limit your escape routes, it may suggest to other motorists that it is legal for them to share a lane with a motorcycle. When traveling with other motorcyclists, it's best to ride in a staggered formation, using both sides of the lane. When riding in a large group, leave gaps in the formation to allow other vehicles to pass or exit the freeway.

All of us can share the road and do it safely, as long as we follow the "rules of the road," keep our eyes open for each other, and use common sense while operating any type of vehicle.

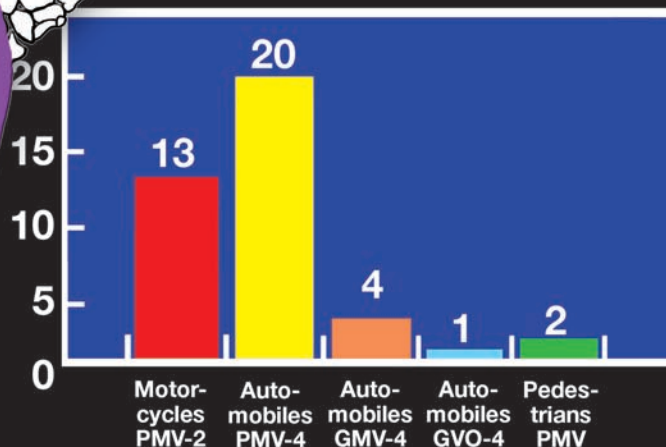
Play it safe, keep it smart, and remember ...

Take a sec and double check. Motorcyclists are dying to be seen! ■

Snapshot on Safety

3rd Quarter FY06 Update

Motor Vehicle Fatalities Total FY06



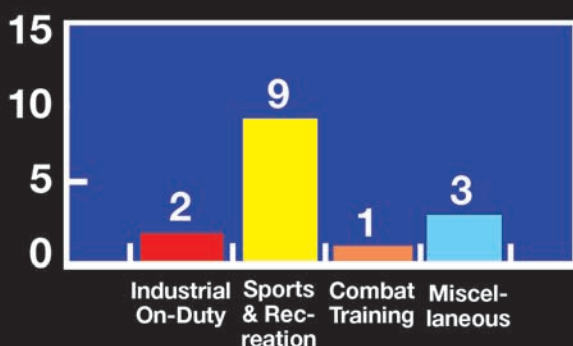
This quarter we suffered nine automobile deaths and seven motorcycle deaths. As you can see from the chart above, 55 of our Airman have died so far this FY. Without exception, all of these mishaps were preventable. Mishap prevention and risk management must be foremost in our minds at all times. We have all heard that a chain is no stronger than its

weakest link. In every mishap sequence, the chain of events could have been broken at some point. We MUST become better Wingmen; we must do what it takes to break the mishap-sequence chain!

As you read the mishap descriptions that follow, look beyond the lessons learned. Ask yourself, "How many opportunities were there for someone to intervene?"

An Airman drove to a local bar to attend a farewell party for a fellow Air Force member. As the evening progressed, friends and co-workers gathered for

Non-Motor Vehicle Fatalities Total FY06



the festivities. They ate, enjoyed some alcoholic beverages (our Airman consumed at least nine) and played pool; all in all, most likely a pleasant evening of camaraderie and friendship. Sometime after midnight, our Airman bid farewell to all and left in his vehicle. As he drove home, his vehicle departed the road at 30 mph above the posted speed limit, with fatal results. His BAC was more than double the legal limit.

Lesson learned: Alcohol skews perception, coordination and reaction time. Safe driving

demands those very abilities.

An Airman spent the afternoon visiting with relatives at their home. Sometime after he arrived, they asked if he would like to go swimming. He said yes, and when asked if he knew how to swim, it was reported that he said he thought he could do it. So, our Airman and three family members departed in his vehicle, with intentions of going for ice cream afterward. Their destination was a railroad bridge that spanned a local river. The idea was to enter the water some 25 feet below by jumping off the bridge. After they walked out onto the bridge, they sat for a while. While sitting, our Airman told the others that he was nervous about jumping off of the bridge into the river, but was going to do it. They decided the order they would jump in, with our Airman opting to go last. After the other three had entered the water, the Airman wouldn't jump. So, one of the others returned to the bridge and it was decided that they would jump together. The Airman surfaced in a state of panic and drowned, in spite of efforts to save him.

Lessons learned:

- (1) Know your limits and do not exceed them.
- (2) Swim only in approved areas.
- (3) Ensure that a trained lifeguard is on duty to respond to emergency situations.

After installing a power command module designed to enhance acceleration and speed by increasing horsepower, our Airman was very likely eager to take his new, and newly equipped, motorcycle for a ride. He had finished installing his new component and departed before noon, leaving the garage door up and tools scattered about the garage floor. It was a beautiful day, and conditions were excellent. With more than 20,000 miles of riding experience, in addition to his basic motorcycle rider course training and a new toy to play with, the Airman must have been enjoying his ride very much.

We'll never know just what he was thinking (perhaps of his wife, soon to return from a deployment), but one witness indicated that the Airman was seen looking at the side of his motorcycle in the general area of the newly installed power command module just before the mishap occurred. The investigation indicated that the Airman was traveling at a high speed when he struck the rear of a bus stopped ahead of him. He did not survive his injuries.

Lessons learned:

- (1) As with all things performance-dependent, know your limits and don't exceed them.
- (2) No amount of training or experience can off set a distracted operator. ■

Gas Can Fire Damages Vehicles

CHRISTIAN DELUCA
GUIDON staff
Fort Leonard Wood, Mo.

(Editor's note: Reprinted courtesy of the GUIDON, the post newspaper at Fort Leonard Wood, Mo.)

June 5, 2006—Ten vehicles were damaged in a parking lot here, by a fire that started in the trunk of a car that held two five-gallon gasoline cans. The Fire Department suspects that gas fumes built up inside the closed trunk, and then were ignited by a spark from an electrical source, such as the tail lights or brake lights. No one was injured, but this incident could easily have caused serious injuries and much greater damage. Gasoline and other fuels are extremely dangerous, and we must use great care when using, transporting, or storing them.

Damaged cars sit in the General Leonard Wood Army Community Hospital parking lot at Fort Leonard Wood, Mo., after a fire June 5.

Photos by Robert Sperberg