

GroundWarrior

Marine Corps Ground Force Preservation & Readiness

Vol. 7, Issue 2



Summer « Safety

Things to think about
during summer fun

Expensive Lesson « In Personal Protective Equipment

Application of Principles: « Tactical Safety in the Field

Mishaps waste lives, time, and resources. This magazine's goal is to make Marines aware of mishaps and hazards that have been experienced and identified by fellow Marines. The study of these lessons learned heighten awareness and identify tools that all Marines can use to avoid similar mishaps and mitigate risks.

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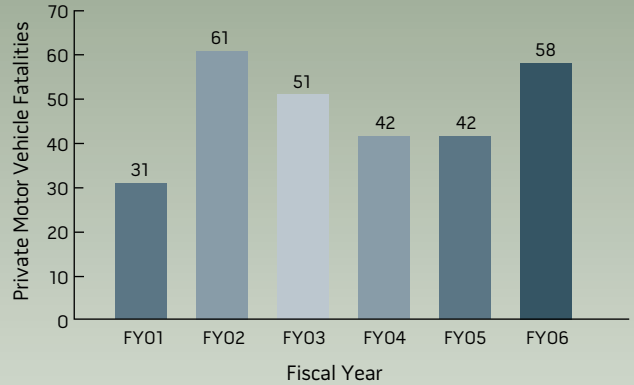
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By the Numbers

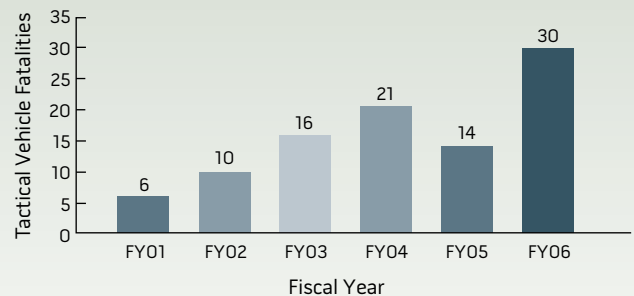
How mishaps are affecting our operational readiness

Vehicle mishaps, whether on liberty or operationally, have resulted in some of the highest mishap fatality rates in recent years. Below, the numbers compare the Fiscal Year of 2006 to the last five Fiscal Years.

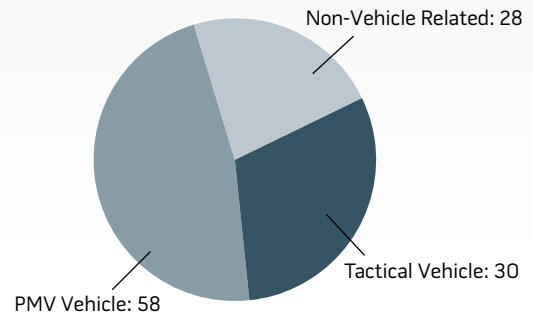
Private Motor Vehicle Fatality Totals by Fiscal Year



Tactical Vehicle Fatality Totals by Fiscal Year



Mishap Fatalities for Fiscal Year 2006



From the Director

Headquarters Marine Corps Safety Division



Marines,

As I retire from the Corps, I can truly appreciate how safety has played a key role in the success of each and every command and unit that I have served in during my twenty-six year career. My diverse career has taken me all over the world and allowed me to serve alongside true warriors and professionals. As the Director of Safety Division, I have seen, firsthand, the profound positive impact that implementing and maintaining safe policies and procedures has on the Corps at every level. Unfortunately, I have also observed negative impact that is a direct result of Marines neglecting safety both on and off duty.

Safety Division enhances the war fighting capability of the Marine Corps through Force Preservation. We have steadily progressed toward meeting the Secretary of Defense seventy-five percent mishap-reduction goal by 2008. Safety Division, along with the Naval Safety Center, has implemented many strategies and initiatives guiding the Corps to not only achieve this goal, but to surpass it.

Command Climate Surveys (CCS), the Aviation ORM and Fundamentals Campaign, and the Warrior Preservation Status Report (WPSR), among others, have produced positive results. All of the Tactical Safety Specialist (TSS) billets have been filled, allowing safety presence at the Regimental/Battalion levels. In the near future, we will unveil new safety initiatives, including the first modules of the Global War on Error (GWOE) and we have already instituted the first of many new interactive safety websites, including the Travel Risk Planning System (TRiPS), to make safety more relevant, comprehensive, and user friendly.

I am extremely proud to have had the privilege to serve as the Director of Safety Division as my last assignment in the Marine Corps. As we look ahead to the future of Safety in the Marine Corps, it is quite clear that Marines can expect more effective means of enhancing mission readiness through Force Preservation. Safety requires vigilance. We have a lot of work left to do; I wish my replacement as Director of Safety Division, Mr. Donald C. Weightman, and each and every Marine the best! Farewell, and take care of each other.

Semper Fi,
Fred Wenger III
Col Fred Wenger



GroundWarrior





« LCpl Arturo Gomez, a team leader with Alpha Company, 1st Battalion, 7th Marine Regiment, leads his Marines down a slope while searching for a concealed position in which to hide from mock indirect fire during a live-fire training exercise at Marine Corps Air-Ground Combat Center in 29 Palms, Calif.

Photo by Cpl Antonio Rosas

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ON THE COVER

« Marine prepares to rush during Mojave Viper Training at Marine Corps Base Twenty-nine Palms.

From the Editor

Readers,

As the New Editor of Ground Warrior, I appreciate your patience for the release of this particular issue. I know that it has been awhile; this is because I believe that as valued readers, you deserve the best.

The New Year has finally arrived. As we venture into 2007, it is best recommended that we exercise every possible method to protect our Marines in Training as well as Combat.

Marines,

I recently had the opportunity to get back to Iraq. My travels were unfortunately to visit a unit for a mishap. As a mishap investigator I have to dig into a tragedy experienced by the unit and the Marine Corps. It normally involves tearing into healing wounds, as I ask the witnesses questions that they have been asked by a JAG investigator and NCIS. This trip to Iraq was no different.

I knew that when I was on my flights into Iraq on the C-130, I would be getting some good things to bring back for Ground Warrior. It had been over two years since I had been in the sandbox and I had lost touch with the real operating forces. It's very easy for me to sit back in Norfolk, Virginia, in front of my computer and tell the Marines what needs to be done in our articles. However, an experience like this would bring me partially back to reality.

First, I learned that the operating forces are definitely thinking force preservation and safety. I saw more posters about safety, reminding me what I need to do, and how to do it safely. "Think Safety, and then Act," "Safety First, Mission Always," and on, and on. I am pretty sure some of the Marines are numb to some of it. Just remember, that the posters are not just for decorating HESCO barriers. There is a reason for having them.

Secondly, I saw people doing things unsafely everyday. Granted my perception is with my "evil" eye of safety. I have the mindset of Ben Stiller's, risk assessment character, in

Along Came Polly, so I make sure I check my common sense on the nearest Marine when I observe something I believe to be unsafe or just plain dumb. Ninety percent of the time, the Marines agreed with me. Therefore, I am asking you the Marine on the ground to step-up and kindly remind your fellow Marine when what they may be doing is not smart. It can be your part of trying to protect your own.

Finally, I was motivated by the things I saw out there that I had previously reported on. The Combat Ear Plugs, HMMWV rollover training, weapons clearing procedures, etc. I am not sure if what we did here at Ground Warrior helped get those issues pushed to the forefront and then policies changed. No matter, it is what we are doing here, that can affect business. The distribution of this magazine will occur as I depart this billet, but as Infantry Officer, I have learned a lot by looking at the fleet through the eye of Safety. My fellow 0302 will take the helm, transparently to the reader and continue to shed light on the most current mishaps. Do your best to make his job hard by protecting your own as you continue to engage the enemy.

Semper Fi,



Capt Billy Edwards, USMC
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The Ground Warrior seeks your submissions

If you have witnessed or participated in an operation that involved a mishap or near-miss, submit your story, long or short, so we can learn from one another.

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• By Letter: Ground Warrior
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• Any questions, call (757) 444-3520 x7170, DSN 564

Submissions can be completely anonymous, as the *Ground Warrior* is not used to blame Marines. We just want to teach the hard lessons.

Your submissions
help **protect your own**



Letters to the Editor

Readers,

The Ground Warrior staff is always looking for your feedback and submissions, good or bad.

Contact the GW via e-mail: SAFE-GrndWarrior@navy.mil –Ed

SMAW Spotting Rounds

I recently read your article: “Negligent Discharges: A Momentary Lapse”; “Counting to Five”, [Vol. 7, Issue 1] concerning a SMAW gunner mishap. The article indicates that the gunner fired 5 spotting cartridges, thinking that was all he had, and considered the weapon in Condition IV. Unfortunately, during cleaning, he discharged the sixth round into the hands of a fellow Marine. Your article also cites that five 9mm spotting cartridges come with each SMAW rocket. This is in error. Each SMAW rocket comes packed with six spotting cartridges in the magazine, not five.

Axel Fait

Program Manager, Anti-Armor Systems
Marine Corps Systems Command

[note]

The SMAW round comes with six 9mm spotting rounds.

Flash Bangs

In the recent “Tales from the Fighting Hole” article titled “Flash Bangs” (Volume 7, Issue 1) you referred to the MK3A2, as a flash bang. The MK3A2 offensive grenade inflicts casualties during close combat. Its blast effect is to be used against a known enemy and should not be used when the occupants of a building are unknown or against civilians.

Steven C. Koslowsky

Tactical Safety
Marine Corps Bases Japan Safety Office

[note]

The flash bang, DODIC- DWBS, is commonly known as the MK 141. It is no longer in used by the U.S. Armed Services. Just after that edition went to print, there was another injury, making it four Marines injured using the DWBS since April 2005. The Marine Corps has replaced it with a similar grenade, DODIC- BTV1, commonly known as the NICO Pyrotechnik BTV1-Bang diversionary grenade.

Required Safety Gear

I read GW each time it comes out and like the lessons it teaches and the information that it passes. I feel obligated to point out that the cover of Volume 7, Issue 1, is a cool picture, but the Marine does not have prescribed throat and eye protection. I know it's nit-picky, but Marines do as they're told, and as they see.

I do enjoy your magazine and will continue to display it in my work area for my Marines to learn its lessons.

MSgt Jonathan R. White
3rd Reconnaissance Battalion

Parachute Training

The article about a young Marine participating in a parachute operation [“Are Marines Trained to Jump?”, Volume 7, Issue 1], brought a question to mind for me: Were the performance characteristics of the parachute briefed, as they should have been, during the jump brief by the primary jumpmaster? This whole mishap would have been avoided and the operation conducted safely had the personnel entrusted to lead and supervise the training performed their duties properly. To me, it seems like more of a local command leadership issue than a schools/equipment issue.

[note]

The key issue was when the parachute opened, the jumper was startled by the open steering orifices in the rear of the parachute, which caused him to hesitate and become confused. Once he realized that the openings were supposed to be there and removed his hand from the reserve, the jump brief sunk in and he realized he could steer the parachute. However, it was too late, and he was already making contact with the ground. The unit did nothing more than the minimum to ensure that the Marine was familiar with the equipment being used and how the equipment performs. Basically, the unit determined he has jump wings, thus he can jump any parachute. -MSgt Johnson

» Using standard military parachutes, cargo planes must fly at lower altitudes to ensure accurate drops, but are more susceptible to enemy fire.

Photo by SSgt Bill Lisbon



» Cpl Justin R. Wentland conducts stopping drills during a Basic Rider's Course held by the Certified Rider Coach. Active-duty motorcycle riders are required to take this course before riding on or off base.

Photo by Cpl Miguel A. Carrasco Jr. Photo ID:



The background of the entire page is a photograph of two motorcyclists riding on a road. The rider in the foreground is on a blue motorcycle, wearing a dark jacket and light blue jeans. The rider behind is on a red motorcycle, wearing a blue and red jacket and light blue jeans. Both are wearing helmets. The background is a blurred landscape with hills and a clear sky.

Summer + Safety

Compiled by Staff Writer

Safety Precautions Save lives

While you are gearing up your motorcycle for warmer weather, your command wants to make sure safety remains paramount.

Before owning and operating a motorcycle, Marines must complete required training courses and have all the required personal protective equipment.



« SSgt Holub, a native of Marion, Kansas and an Ordnance Technician with VMA-214, prepares a volleyball net for the unit's family picnic.

Photo by Sgt David A. Bryant

local cab drivers.

Arrive Alive is a program sponsored by Marine Corps Community Services (MCCS) that aims to help Marines and Sailors avoid alcohol-related incidents through travel vouchers. When Marines and Sailors find themselves in a situation where safety is a concern due to alcohol consumption, the program provides a way to get home.

“We hope to decrease the on-and off-base driving-under-the-influence incidents and get the message out (to) not drink and drive,” Amanda L. Moore, a contract specialist with Marine Corps Community Services Camp Pendleton said. “We want our Marines and Sailors, as well as others, to be safe on the road.

Units can establish an Arrive Alive program. At Camp Pendleton, to qualify for the program, a unit must have a commander's recreation fund. At Pendleton, 55 units on base have established a fund, and 42 of these units participate in the program. “MCCS pays 100 percent of the cab fare initially, and then the service members reimburse MCCS 50 percent of the fare,” explained Moore. “The recreation fund will be used to pay the 50 percent if the Marine or Sailor does not personally reimburse MCCS,” said Moore. Currently, there are no reported incidents of non-reimbursement.

For a service member to redeem the voucher, “They simply call a cab and (provide) the voucher containing the service member's battalion number and commander's name and number. The voucher is presented to the driver, and the Marine or Sailor is then taken home,” said Moore.

If abuse occurs, the service member will be held 100-percent responsible for the cab fare. “We would like to see more service members take advantage of this program, but, at the same time, we will not tolerate abuse of this program, either,” Moore explained.

For more information on the Unit Arrive Alive program and Arrive Alive program, contact your unit safety representative or Marine Corps Community Services on base.

Marines riding motorcycles must have a fastened helmet, shatter-resistant goggles or a full-face shield attached to the helmet, a reflective vest, long-sleeved shirt and pants, hard-sole boots, and full-fingered gloves or mittens, according to the order.

Base and station motorcycle riders' clubs are also a great resource for new riders to learn from more experienced riders.

Since October of this year, 10 Marines have died in motorcycle accidents. Safety

precautions such as the classes, clubs and required PPE are meant to educate and protect Marines and keep them safe so they can perform their duties.

Cab Vouchers Help Marines 'Arrive Alive'

Story by LCpl Lindsey L. Sides

Marines are not taking full advantage of base-wide programs designated to help save lives, according to base officials and

Something to Consider When Drinking Alcohol This Summer

During the summer, Marines and Sailors often are going to have a “cold one” to cool off, and it’s important to take some of the info below into consideration before drinking heavily. The info is not the “standard preaching” of don’t drink and drive but real considerations you should give the effects of alcohol on your body in the summer heat.

By following these simple guidelines, you can prevent an alcohol-related mishap or health problem.

1. Never drink and pilot a boat of any kind. The same things that make drinking and driving dangerous (impaired judgment, information processing, and coordination, among other alcohol effects) can be as deadly on water as they are on land. Boating, windsurfing, jet skiing and waterskiing – anything that involves speed and skill – all can be dangerous to anyone who has been drinking.

2. Do not swim or dive if you have been drinking. Remember that alcohol will inhibit your swallowing and breathing reflexes, both of which are necessary for swimming, and will make you feel warmer than you really are, putting you at risk of hypothermia in cold water. In addition, drinking affects your ability to judge distances and may lead you to swim too far out into a lake or ocean.

3. If you are riding in a boat, remember that alcohol will impair your balance and increase your chances of falling overboard. This danger, compounded by alcohol’s effects on your swimming ability, is a common cause of drowning.

4. If you are a heavy drinker, remember that alcohol consumption during the summer can:

- More rapidly dehydrate you
- Raise your blood pressure
- Increase your chances of developing hypoglycemia, a condition that

causes weakness and interferes with the body’s temperature regulation

- Increase your chances of becoming a heat casualty or stroke victim

5. Eat before and during occasions when you are drinking -- eating will slow alcohol’s effects. Remember that drinks containing sugar, the beverages often chosen in hot weather, combine with alcohol to produce a hypoglycemic effect even greater than that caused by alcohol alone.

6. If you are a woman, remember that alcohol will have a greater effect on you than it will on a man of your weight.

7. Remember that alcohol will impair your performance in most sports, making you more vulnerable to accidents and injuries. This includes extreme sports such as skydiving, motocross, and ATVs. **GW**

National Council on Alcoholism and Drug Dependence, Inc. <http://www.ncadd.org>

✓ Boating is growing as a pastime and enjoyed by many servicemembers and their families, according to Jesse L. Turner, a traffic safety officer with the Base Safety Office.

Photo by Pfc. Matthew K. Hacker



» SSgt Ben Bridges, a support equipment mechanic with Marine Aviation Logistics Squadron 13, operates an ATV wearing the proper protective equipment.

Photo by Pfc Mauro Sanchez





Expensive Lesson

In Personal Protective Equipment
Story by LCpl Kyle E. Holliman

Statistics show that Marines returning home from deployment are at greater risk for injuries or death due to accidents than they are while they are serving in Iraq and Afghanistan. Marines tend to think that after serving in a combat zone they are invincible and nothing can happen to them. That is far from the truth.

“On the way there, he and his passenger were freaked out because I had a stick protruding from my head”

✂️ LCpl Holliman displays what can happen when Personal Protective Equipment (PPE) is not worn while operating motor vehicles like the All-Terrain Vehicle (ATV).



My name is Lance Corporal Kyle Holliman, and about a month after returning from Iraq, I was involved in an all terrain vehicle accident. The week started with my squadron’s main body returning home, so, of course, we held a couple of safety stand-downs that week. I attended a MAG-11 safety stand-down, where they extensively covered wearing personal protective equipment and practicing Operational Risk Management (ORM). The Sergeant Major of MAG-11 read off several accident reports involving cars, motorcycles, and ATVs. He covered incidents of under-aged drinking and hazing. The next safety stand down I attended was conducted by my command that Friday, where we covered very similar topics.

That same Friday, I was invited to Gila Bend Ariz., to visit friends. After getting off work, I traveled to my destination, arriving around 2200, where I hung out for a few hours and hit the rack. I woke up around 1000 on Saturday morning and had breakfast. Around 1200, we decided to go to the cemetery to barbeque and ride 4-wheelers in the wash nearby--it is a Mexican tradition to barbeque next to the grave of a loved one. Before we left, my friend, Vee, was warming up the quad at her father’s house to ensure it was operating properly. I had never driven a quad before. I had ridden as a passenger, but never been in full control of one. So, I asked her to teach me before we went to the wash. I went up and down the street, and I thought I had caught on pretty quick. I was not wearing a helmet. After we got to the house, we started to head out to the wash to BBQ and ride the quads. Once we arrived, we fired up the BBQ, and I hopped on the quad for the second time without a helmet, making my way into the wash. I rode for about half an hour, trying to get used to the turns and bumps. Then I returned to the BBQ. A while later, I decided to go for one more ride before I had any beer to drink. I got back on the quad, violating several safety precautions, such as: no helmet, no goggles, no gloves, no chest proctor, and I was wearing a short-sleeve shirt and shorts. I got on the quad and got on a trail I had not gone down before. I gunned it and was moving pretty fast in high gear when I came up on a tight snake turn. First it was a small right turn into a decline with a lot

of small ruts. It then went into a slight left turn and back into a straightaway. I made a right turn, and hit the bumps too fast and went airborne. I landed on my right two wheels and bounced back up straight into a large bush. I never fell off the quad, nor did it roll. I came to an immediate stop. I sat there for a couple of minutes, soaking in what had just happened. I then got off the quad and was very angry at myself for being so stupid. I was bleeding heavily from the top of my nose where I had about a two-inch gash across the top of it. I did not notice it at first, but after a couple of minutes when I looked into my shadow, there was something sticking out from behind my right ear. I reached back and felt it. A stick that was lodged about two and a half inches under my skin in the back of my head. The eight-year-old boy behind me had seen what had happened. He was really freaked out. I told him to get Vee’s sister, who was nearby riding her quad. He left and returned shortly with her. They both told me to stay there while they went and got help, but I told them I was fine. I removed the quad from the tree and started it back up. I rode back about a quarter of a mile to the BBQ where everyone was leaving due to high winds. One of the people at the BBQ worked at the local Fire Department. He picked me up and drove me there. On the way there, he and his passenger were freaked out because I had a stick protruding from my head. I told them I was Fine and to be honest, I felt perfectly fine. I had a very small amount of pain. When we arrived at the Fire Department, I got out of the vehicle and lit up a cigarette while waiting on them to get the paramedics. When they came out, they had the same reaction as the people who drove me there. They took a look at the stick and decided to call for paramedics to transport me to the nearest hospital. At the time I did not think it was that serious. I was perfectly coherent and awake, and I had no problems answering their questions. My vitals were normal, aside from my high pulse. When the paramedics arrived, they decided against sending me to the trauma unit, and took me to the emergency room, instead. I arrived at the hospital emergency room, where it seemed like every person who worked there just had to see the “dude with the stick protruding out of his head.” All I could do was laugh and smile. Once



⚡ Marines stop and take in the scenery at Senator's Wash, 25 miles north of Yuma. The stops also allowed them to check for any vehicle damage and ensure every Marine was uninjured and accounted for.

Photo by Pfc Mauro Sanchez

the doctor arrived he gave me four shots in the wound to extract the stick. Once it was out, the blood would not stop flowing. I was extremely glad at that point that I was at the hospital and had decided not to pull the stick out myself. After leaving the hospital, I went back to my friend's house for the night to rest up, and the next day, returned to San Diego. I reported into my command where they decided I was to be sent to Non-judicial Punishment. I was charged with twice violating article 92 of the Uniform Code of Military Justice: once for disobeying my Commanding Officer for not wearing a helmet, and the second for disobeying my Master Sergeant. My punishment was reduction in rank to PFC, one-half months pay for one month, and 45 days restriction/ 45 days extra duty; all which were suspended, for six months except for the half-months pay, \$846.00. The CO also banned me from driving any motorized vehicle that I did not have a license for, which boils down to anything except a car or truck.

An average adult-size ATV weighs between 500 and 1,000 pounds and can travel 75 mph. You can see how easy it could be to receive serious injuries from this type of vehicle. Many states do not have an age limit for these vehicles, but there are sug-

gested sizes for each age group. Ages 6-11 should ride under 70cc, ages 12-15, 70cc to 90cc, and ages 16 plus, over 90cc. The moral of the story is if you want to enjoy your ATV, be safe and responsible while riding it and be cautious of others who are not riding safely.

There are many factors that can cause an ATV accident. A few of these are: improper positioning of the vehicle, too many riders on the vehicle, lack of protective gear, operating the vehicle at an unsafe speed, and operating it under the influence of drugs or alcohol. Other causes could be due to manufacturing defects and flaws in the manufacturing process. Every year there are thousands of ATVs recalled in the U.S. due to problems that could cause loss of control of the ATV and cause serious injury or death to the rider. In 2001, in California, Suzuki voluntarily recalled more than 7,000 youth ATVs that had drive-chain problems that could injure or kill a child rider. Thirty-five percent of all ATV-related deaths occur to children under the age of 16. ATV-related incidents that warranted emergency room visits have gone up 100% in the past 5 years..

There are many things I could have done to prevent my accident and my injuries. I should have gotten more experience

riding an ATV. There are classes that you can take aboard my duty station. If you are new to riding ATVs, this is a very smart way to learn proper handling techniques for a safer ride. I could have driven slower due to my lack of experience. Many safety-gear options are available for ATVs, like helmets (most states require that you wear a DOT-approved helmet), goggles (an overlooked item by many, but much better to have than loss of sight), chest protectors, long-sleeve shirts and pants, and gloves of which I did not have. **GW**

“An average adult-size ATV weighs between 500 and 1,000 pounds and can travel 75 mph”

Shockingly Complacent

Story by Staff Writer

A Marine was troubleshooting the high-powered transmitters on an AN/TPS-63B short/medium-range radar system when he received an electrical shock of approximately 14 kilovolts (14,000 volts) direct current (DC). Two other Marines inside the radar shelter were within a few feet of the shocked Marine when the mishap occurred. The Marine had lost consciousness, had no pulse, and was gasping for air by the time the other two Marines arrived and carried him outside the radar shelter.



The radar officer-in-charge (OIC), who is a certified emergency medical technician (EMT), immediately was called to the scene and began cardiopulmonary resuscitation (CPR) on the injured Marine. When emergency medical-services personnel arrived, they continued CPR and used a defibrillator three times trying to revive him. The defibrillator worked successfully, and the injured Marine was stabilized. He had regained consciousness but wasn't responsive yet when he departed the mishap scene. He went to a local hospital for observation and assessment, and then was flown to a more extensive medical facility with a burn center for further treatment. He remained there until he attained a stable condition and then was released six days later. The Marine spent two weeks on convalescent leave and finally returned to full-duty status within a month.

The AN/TPS-63B radar system has been fielded within the Marine Corps inventory for more than 30 years, and this type of incident is uncommon. However, the radar system operates with several high-voltage subassemblies, many with a potential of 18,000 volts DC. Several precautions are designed into the system.

The area that was being troubleshot within the radar system requires five separate safety interlocks, warnings, and physical-safety barriers to be bypassed before the high-power-transmitter subassembly can shock anyone. These factors, coupled with extensive training in the formal training course at Marine Corps Base Twenty-nine Palms, Ca, before entering the operational forces, do not guarantee an accident will not occur. Proper supervision and following the procedures are necessary.

The mishap was a direct result of improper installment of the transmitter's grid-pulsar-assembly. Three input cables

« The AN/TPS-63B Short/Medium range radar system in Marine Corps base twenty-nine palms.

Photo by Sgt Clinton Firstbrook



⤴ Switch board to the radar system is quite complex and requires strict adherence to procedures.

were put on incorrect jacks. This mistake did not allow the assembly to be triggered properly, therefore causing a malfunction and, ultimately, the potential to shock.

Regardless of the fact that the repair parts and equipment were incorrectly installed/wired, the Marines became overconfident with leaving off the protective shields. These shields require substantial time to remove and replace for every small adjustment, adding many hours to the troubleshooting.

The Marines had been troubleshooting a problem with the radar for several hours when this mishap occurred. While the process is tedious, Marines each time must de-energize the unit and disengage safeties to allow them to work on the device, including removal of the safety shields. Operationally checking the grid-pulsar assembly without the shields creates a hazardous condition.

Certain adjustments and alignments are required immediately upon power up and

cannot be accomplished with the safety shields in place, so complacent Marines often leave off the safety shields. This incorrect process generally and wrongly was accepted. The safety shields left off the transmitter-cabinet area and the grid-pulsar assembly within the transmitter mishap could have prevented this mishap. The Marines had begun taking shortcuts, and the shield was left off because of complacency and frustration with the system.

The Marines troubleshooting the equipment also did not maintain an appropriate amount of respect for the high voltage with which they were working. The injured Marine was sitting on a conductive metal stool that placed him too close to the high-voltage source and provided a path for less resistance than the normal circuitry. Electricity takes the path of least resistance, and the Marine amplified his own conductive

⤵ Marine stands behind a high voltage area where safety shields are in place to prevent electrocution.

property by sitting on the stool in contact with conductive material. Anti-static matting was on the floor of the shelter for insulating protection, but the metal stool should not have been used while troubleshooting. The stool should not have been in the radar because of its ability to conduct electricity.

When several safety factors are allowed to lapse, the results can be life-threatening. Regardless of having followed the technical-manual procedures, oversight of the safety measures (allowing unnecessary conductive equipment and materials to be in the radar, not replacing the safety shields, not maintaining a safe distance from the high voltage area, and the lapse in respect for voltage) allowed this event to take place. When Marines work on long projects with tedious detail, errors can begin to occur. Leaders should remain aware of this potential problem and exercise the required supervision.

Each year, Marines are killed and seriously injured in electrical mishaps- all of which are preventable. Quite often, it's the overall complacency around these normally benign electrical devices that causes the mishap. **GW**





Jacki

In December 2005, a motor transport mishap occurred during a convoy training exercise that emphasized the need to follow orders and technical manuals, even when preparing for combat conditions. The mishap left four Marines injured and one dead when the MTRV the Marines were riding in flipped. The mishap occurred primarily because of improper towing procedures and operator error.

Jacki

Story by LCpl Kyle Holliman



Considerations for Towing:



1. Have I embarked the proper SL-3 components for the towbar? (i.e. towbar, inter-vehicular airlines and safety chains)
2. Are the vehicles' CTIS settings covered in convoy commander's brief?
3. Can I stop my vehicle and the vehicle being towed in any given scenario?
4. Is the speed and maneuverability of the convoy being considered with respect to the towing vehicles?
5. Do I have a recovery plan for each vehicle in the convoy?

The Marines involved in the mishap departed their release point at approximately 1000. While en route to their first check-point, the convoy suffered a simulated IED attack. In accordance with the rules of the exercise, the IED disabled one of the MTVR's in the company convoy, and the Marines attached the disabled MTVR to another MTVR in the convoy. The Marines from the disabled vehicle moved to the troop compartment of the vehicle performing the towing. The convoy continued on its route until the towing vehicles reached a 30-35% grade with a slight left turn. As the vehicles descended the grade, the towed MTVR began to gain velocity as it traveled down the decline. The operator applied the brakes to the towing MTVR; however, the inter-vehicular airlines were not attached, which prevented the operator from slowing the towed vehicle. The mishap MTVR driver pumped the brakes in order to slow the vehicles' descent causing a variation of momentum between the towed vehicle and the towing vehicle increasing the inability of the operator to maintain control of the vehicle. The MTVR skidded slightly to the right towards an embankment as the towed vehicle continued on a straight travel path causing both vehicles to jackknife. The towing vehicle having the most momentum began a driver side to passenger side roll eventually landing up-

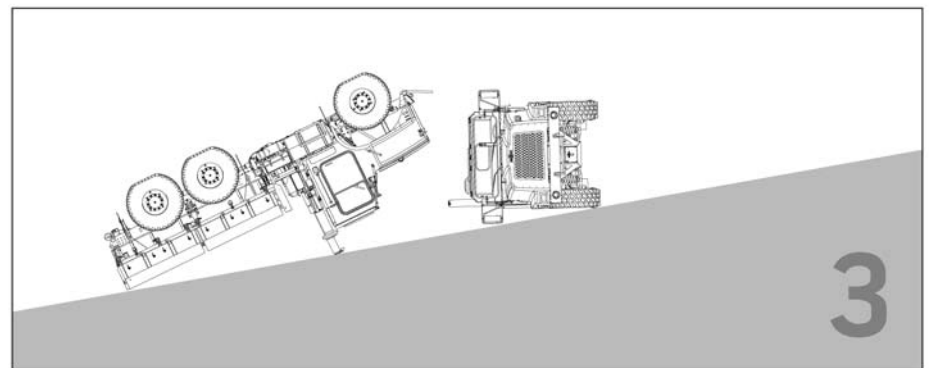
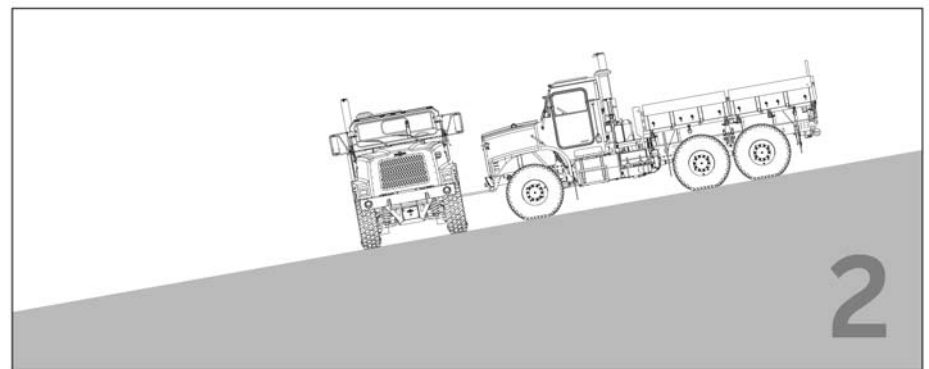
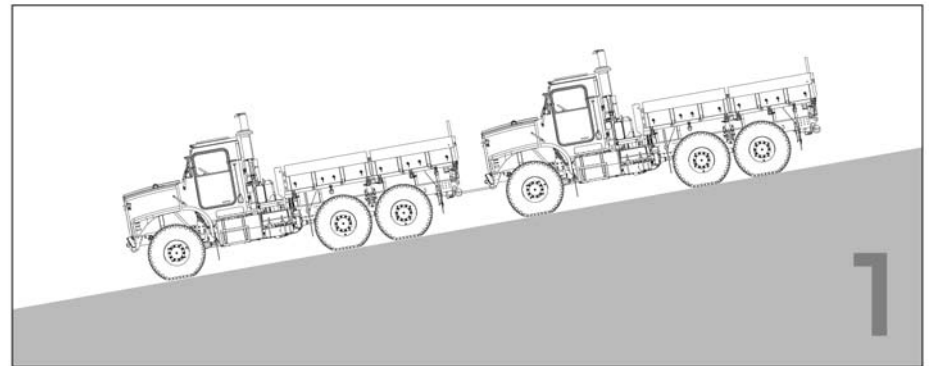
side down on the embankment killing one of the Marines and injuring four others in the troop compartment.

Unfortunately, the Marines who attached the towbar to the rear of the disabled MTVR failed to attach the MTVR inter-vehicular airlines and safety chains between the two vehicles, which is a common practice in Iraq. Some Marines in Iraq adopted the towing method where the towbar is initially attached to the front towing shackles of the MTVRs and HMMWVs and then fastened to the hood of the HMMWV using cargo straps. This allows for quick recovery procedures because the disabled vehicle only has to unfasten the cargo straps, connect to another vehicle's pintle hook and continue on its route. However, the MTVR towbar technical manual requires that the inter-vehicular airlines and safety chains be utilized during all towing operations. Without the inter-vehicular airlines, the MTVR cannot brake evenly across all six axles of the towing and towed vehicles. Without this braking ability, momentum can cause the towed vehicle to speed past the towing vehicle and flip both vehicles. In addition, the safety chains are the final failsafe in the event that the towbar connection breaks in order to ensure that the coupled vehicles remain together. Unlike the 5-ton vehicle, the towbar of the MTVR is a separate



table of equipment item with its own SL-3. Unit leaders need to ensure that all of the SL-3 for the towbar is embarked and on hand for operations.

Furthermore, the operator committed two errors that contributed to the mishap. The post mishap LTI indicated that the mishap vehicle operated in “Highway 0-2” Central Tire Inflation System terrain setting rather than the required “Cross Country” CTIS terrain setting. The “Cross Country” CTIS setting would have provided the operator with more traction and perhaps lessened the possibility of the vehicle losing control. It is recommended that future convoy commanders consider the type of terrain that the convoy will traverse, and include CTIS settings in the convoy checklist. Also, the operator made post-mishap statements that he focused his attention on the scenario-driven events happening in front of his vehicle rather than on the towed vehicle. This momentary loss of situational awareness led the operator to attempt to travel the decline at too great a speed. Operators involved in towing operations need to understand the impact that a towed vehicle has on their maneuverability. It is recommended that all motor transport operators receive training on towing procedures with practical application that allows Marines to experience the difficulties involved in towing operations.



Unit leaders face difficult decisions during combat conditions that compel them to alter or ignore established orders and operating procedures. However, simulated combat scenarios such as those that occur during training exercises should not be an excuse for Marines to ignore technical manual instructions. Towing presents a challenge for unit leaders and individual operators both. Unit leaders and operators need to be aware of the convoy speed, towbar SL-3, and the CTIS settings during all movements. Failure to follow the technical manual creates the possibility for mishaps such as the one that occurred. **GW**

⚡ How a Jack-Knife can occur.

1. Vehicle being towed at a high rate of speed on a 30-35% decline.
2. Vehicle (1) slows down, but is jack-knifed by vehicle (2) MTRVs jack-knife and overturn due to unsafe operating and towing procedures.
3. Mishap occurs.

Application of Principles: Tactical Safety in the Field

Story by by Craig Mears

Force preservation is at the forefront of every Commander's mind in combat situations. Preserving the mission capability of the fighting forces at their disposal is paramount. Recently, the Marine Corps has implemented an additional tool for Commanders to address this topic.

The Tactical Safety Specialist (TSS) program was funded in FY04 and hiring began in FY05 for 34 personnel. HQMC funded 29 more billets in FY06. The TSS originally were hired to augment the Core Safety Services offered by our installations as we began to aggressively target high-risk areas with mitigation strategies.

Appropriate manpower was the first piece of that puzzle. Tactical Safety Specialists are hired at GS09 to GS11 level. They attend a very difficult, 15-week course at the Combat Readiness Center in Ft. Rucker, Al. This course covers a broad range of expertise, which includes but is not limited to range safety, laser safety, tactical-vehicle safety, convoy training, explosive safety, electrical safety, weapon safety, and occupational safety.

The intent of the TSS program was to provide a highly trained specialist that could be assigned at the Regimental or Battalion level in order to provide needed safety expertise to the Commanders. The real benefit is manifested in the fact that they are deployable worldwide. To date, we have deployed Tactical Safety Specialists with Regiments, Battalions, Wings, and MAGs within CONUS and overseas in austere combat environments like Iraq. We have received overwhelming feedback from our warfighters pointing toward the fact the TSS is going to be a force-preservation multiplier for years to come.

For the Tactical Safety Specialist, there are obstacles that must be overcome to be an effective part of the unit. Integrating into the unit's culture is probably the most important goal for the TSS. "Safety" has been associated as an obstacle to mission accomplishment. However, when we correlate

this to Force Preservation, they essentially are one in the same, with the overall goal of preserving all assets the Commander has at his or her disposal. Once this fact is established, it becomes a small leap from Force-Preservation to Safety. They are, in fact, the same effort under a different title. This is an example of the value-added benefit that the TSS has to offer the Commander in the field. Additionally, the TSS attends all field training, workups and various other training evolutions. They eat, sleep and breathe like the active-duty Marines.

We learned from each other by teaching classes at Safety-Council meetings

As we are aware, part of the stigma stems from the traditional role of safety, inspections, reports, etc. While inspections, reports, etc are important integral components of a vibrant safety program, the TSS guarantees that all information gleaned during the course of these evolutions are exclusively for the Commander, to the benefit of the command. This guarantee of confidentiality builds the bond of trust between the TSS and the commander. Diverse training and experience compliment the TSS

abilities as well. All TSS attend the Career Path-12 course for safety professionals located at the Combat Readiness Center, at Fort Rucker. Training includes explosives, industrial hygiene, electrical, construction, mishap investigation and reporting, and general industry, to name a few. This diversity of training provides the TSS with the tools necessary to effect measurable change toward the Force-Preservation effort.

While training is extensive and intensive for the TSS, there are plenty of situations that require subject-matter experts with knowledge peculiar to a given discipline. This requires that the TSS must venture out and seek these individuals to compliment the effort. Consolidating all available assets serves to enhance the TSS overall capabilities. With so many moving parts, how do you put all the pieces together? Here is an example:

In April 2005, I was engaged as a Tactical Safety Specialist for Marine Corps Base, Quantico, Va. Upon assuming this position, my office immediately began preparing me for the CP-12 course by providing CBT (Computer-Based Training) on ammunition and explosives safety.

I arrived at the U.S. Army Combat Readiness Center to undergo training at the CP-12 course for Safety Professionals in late May 2005. Having had several years of previous safety experience, I had a strong foundation for the course. However, there were a tremendous number of new perspectives and methods that I was able to incorporate. The one missing piece I noted was those orders and directives peculiar to the Navy and Marine Corps. This is where my previous experience as a Safety Officer paid off.

Upon completion, the class was granted the designation of Certified Safety and Health Official (CSHO), which further added credibility to our efforts. Shortly after my return to Quantico, I was sent TAD to II MEF to support Operation OIF. I was attached to the 2d Marine Aircraft Wing

(Forward) as a special staff member to BGen. Milstead, the 2d MAW (Forward) CG. The General articulated three specific points he required of me. First, he expressed a desire for me to serve the interest of the command by guaranteeing confidentiality. Second, he asked that I serve the interest of the entire command and execute site visits to all locations where 2d MAW (Forward) assets were located. And last, the General asked that I address the “base” piece as his subject-matter expert. I further was advised that I was viewed as a II MEF (Forward) asset and would serve that interest as requested from time to time by II MEF (Forward).

I worked from within the 2d MAW (Forward) DOSS (Department of Safety and Standardization) office with the Aviation Safety Officer and his assistant. During my tenure with the DOSS, I was able to learn a lot about the culture of the Aviation Community (this being more “safety centric” than your average ground unit).

First, I compiled a list of all safety personnel aboard the installation and contacted each of them. I explained who I was, what I had to offer in the way of support to their interest, and asked what I could do to address any concerns through 2d MAW (forward). It was not long after this effort to reach out that a positive relationship began to develop. We established a Base Safety Council and began a concerted effort to improve the infrastructure for the base population. We did this by assigning persons, specific to their particular areas of expertise, to address the various issues we encountered on the installation. I assumed the role of Base Safety and coordinated these efforts. Through these contacts and efforts, I was able to learn the job, in depth, through hands-on experience. After all, being visible and engaged in the entire process contributes to mission success. Additionally, I felt it was an opportunity to lead by example. We learned from each other by teaching classes at Safety-Council meetings. We had a different department



✔ Tactical Safety Specialist Daniel “Dan the Man” Mulvihill, demonstrates how to exit an MTRV variation that is under consideration by the Marine Corps.

Photo by Capt Nicolas Ramseur

instruct each month, and we cooperated and standardized our efforts. We also sought out those persons who could teach us that little something extra. I, for one, was able to locate a Technical Laser-Safety Officer who set up a class for our base and certified us as Administrative Laser Safety Officers. Also, I met a Lieutenant Colonel from the Naval Safety Center, too, and was able to become certified as a Culture-Workshop Facilitator by assisting with his efforts. We rejected playing the role of the victim. Vice being helpless, we found a way to succeed.

During site visits, I coordinated with another TSS in theater, and we conducted our site visits together. The philosophy stated that we could assist each other with unique skills we independently brought to

the table. We found that we could teach our safety representatives at these remote locations the same lessons we learned from our respective home installations. This lesson was that there is a network that has access and answers to any question or concern. We changed the mindset from the excuse, “We can’t; were in combat,” into all the more reason to try harder.

In closing, you don’t have to be an expert in every field. Utilizing available resources, (man, material and machine) can make all the difference. Change perception; this is nothing new. Risk management is something we always do. Let it continue to live up to its reputation of saving lives. There is no such thing as a safety “Nazi.” Everyone wants to stay alive. Safety really is Force Preservation. **GW**



Tales from the Fighting Hole

In the Corps, it's a "fighting" hole, not a "fox" hole. Foxholes are for people who want to hide; fighting holes, on the other hand, are for people who want to fight.

"Tales from the Fighting Hole" is a column dedicated to telling stories from the operational forces. These incidents are unique in that Marines are facing scenarios not duplicated in training. The scenarios present different risks that, if not previously considered, could create a hazard. Our goal with this column is to mitigate some of these risks and to prevent, or "fight," mishaps from recurring.

We welcome your e-mail or letters with information about mishaps you have witnessed while patrolling or driving through the sands of Iraq and Afghanistan. Submissions also are welcomed from those Marines training in the jungles of western Asia or doing humanitarian operations in the storm-destroyed areas of the United States.

While serving as an Individual Augmentee attached to Combined Forces Command – Afghanistan (CFC-A) I had the distinct pleasure of seeing the Swiss cheese model roll out in front of me. My billet within CFC-A is a Strategic Planner, but it is my collateral duty in which I utilized the ORM process more. My collateral duty is Combat Convoy Operations. Although not as intense as those currently going on in Iraq and other areas of Afghanistan, we have had our share of tense moments. On this particular day, I was going on a convoy as a designated "shooter/combat lifesaver" for the lead vehicle. The convoy's mission was to drop off passengers to depart the AOR (a lot of folks with get-home-its), and was going to take place less than a week after the Kabul Riots.

» LCpl David Taborda, ground communications organizational repairer, Force Protection Platoon, II Marine Expeditionary Force.

Photo by Cpl Heidi E. Loredo



The convoy was put together with members of a different unit, and one of my shipmates was designated the convoy commander, even though he had not been to the destination in a long time. My shipmate asked me if I would go along to help him, to provide corporate knowledge if you will, to get the convoy safely to the destination. The convoy brief was to take place at 0745; due to operational intelligence the convoy brief was pushed to 0830. During the intelligence, part of the brief, I found out that the primary route was going to be closed to convoy traffic due to the road being washed out. We were going to use the alternate route to get to our destination. Once I heard that, I got a little tense; I had only been on the alternate route a couple of times, and that route takes you through the city. Along that route are several places to get turned around and possibly lost. Not good in a city where the U.S. had little credibility since the traffic accident that instigated the rioting. Once I found out about the use of the alternate route, I polled our convoy personnel to find out if anyone had driven that route to get to our destination, and none ever had. The alternate route is hardly used because it is longer and more time consuming, mainly due to intense traffic spots, so it was not out of the ordinary that few people actually knew the route. So I immediately began a map recon to re-familiarize myself with the check points (like a good Aviator). As the intelligence brief unfolded, we found out that the alternate route was closed at that particular time due to a traffic accident. Oh, by the way, that accident was caused by a military vehicle in which the initial report listed as one local national KIA and another wounded. If the ORM checklist sensor was not starting to send signals to my brain, that tidbit of information hit me directly in the face. As I mentioned, this convoy was being executed less than a week after the Kabul riots. The main catalyst of the riots was due to a traffic accident initiated by a U.S. military vehicle. We put the convoy mission on hold until we could ascertain what was happening along the route with respect to the local populace.

My shipmate and I discussed the options and decided to go talk to the Force Protection folks to see if they happened to be going to our destination. The Force Protection folks have up-armored HMMWVs (Humvee) with heavy weapons. Our convoy was low profile, no weapons with the exception of long rifles (M-16s) and side arms. As it so happened, they were going to our same destination, but, due to the timing of the departure

being pushed, back they were looking at scrubbing their convoy (and eventually did). Having the Force Protection folks added firepower, as well as personnel that knew the route well. Continued discussion with our intelligence briefer revealed a rollover accident as well as grid lock traffic. After all of that, my shipmate and I decided to scrub the mission and try again the next day.

Let's review:

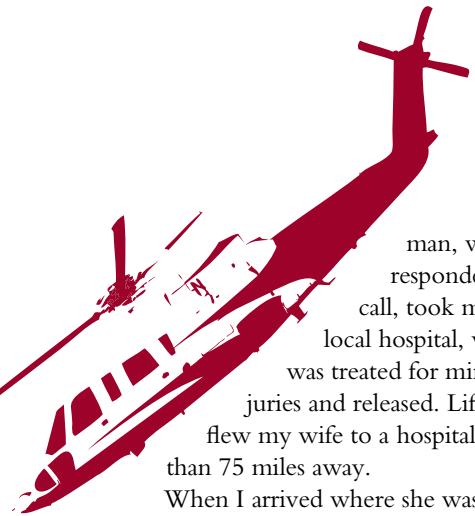
- Use of alternate route, which was not familiar to anyone.
- Get-home-its leading to the mission being pushed to go.
- Accident on the route, which was similar causal factor of the May Kabul riots.
- Low profile convoy with no Force Protection
- Additional traffic accident with grid-locked traffic

Final answer: Mission Scrub!

Like in the Aviation community, causal factors begin to line up, like the "Swiss cheese model," and we have to step back and do a sense-check. We are trained through Crew Resource Management (CRM) to make decisions that may ultimately stop the domino effect leading to a mishap. In this case, that same process provided a foundation to see all the "Swiss cheese" lining up, which led to canceling the mission. Although the city stayed relatively quiet, this mission could have been jeopardized. As far as the passengers, they were able to depart the next day, safe and sound. **GW**

Life Flight

Story by SSgt Wayne T. Jackson



man, who had responded to the call, took me to a local hospital, where I was treated for minor injuries and released. Life flight flew my wife to a hospital more than 75 miles away.

When I arrived where she was, her injuries already had been determined. She had six broken ribs, a broken shoulder blade, and a broken collarbone, all on her left side. The second digit on her right thumb also was shattered, and her right kneecap was broken into three pieces. The next two weeks in the hospital involved surgery to repair her thumb and knee, followed by two months of physical therapy. I escaped with road rash on both arms, a cracked knuckle on my left ring finger, and the guilt of what my arrogance had caused. Eventually she made a full recovery; however, this story could have ended very differently.

The accident had destroyed her full-face helmet. The visor was so badly scratched you couldn't see through it. The chin guard showed deep scars where she had slid across the ground, and the back of the helmet had a dent the size of a quarter. Without the helmet, the injuries to her skull, probably would have killed her.

Most of the stories about motorcycle accidents I've read involve the same ingredients: a young Marine, a sport bike, and a lot of speed. I am not young. I ride a cruiser, and I was not operating over the posted speed limit. Still, I found myself in a bad situation. Many things could have prevented this accident: slowing down, riding according to the road conditions, not carrying a passenger, and becoming more experienced. If we had taken the time to put on riding jackets and pants with pads, the injuries would not have been as severe. Since the accident, I have purchased a new bike and always wear my safety gear. I have also passed the Motorcycle Safety Foundation's riding course.

This accident didn't cost me much money. No citations were issued, and the insurance company paid off the bike; however, it could have cost me the only thing that really matters! **GW**

"Call life flight," the paramedic said, as my heart began to sink. I could not believe what was happening. Everything had gone wrong, very wrong, very fast.

It was a beautiful, cool, summer evening in Arkansas, the perfect day to enjoy a ride on my new motorcycle. It took some doing, but I was able to convince my wife to accompany me. I suggested that she change from the shorts she was wearing into jeans before we left. Then we donned our helmets and hit the road.

After only about a month of riding an old Kawasaki 750, I knew I was hooked. I had to have a bigger motorcycle; it didn't matter if I was ready for it or not. A 1500cc Suzuki Cruiser was my bike of choice. After putting a grand total of 92 miles on my new bike, I felt confident enough to handle anything. "I know what I am doing," I assured myself as we left.

The ride was awesome: a winding country road, with the woman I love and my new bike. This was living! We rounded a few curves, leaning into them and accelerating. "Do we need to lean over so much and go so fast?" she asked. "It scares me." Since we were only going about 40 mph, I didn't really consider her concerns. Again I thought, "I know what I am doing."

The first sign of trouble came when we decided to return home. Turning this bike around was a lot harder than I had expected. The bike was wobbly to the point I almost lost it a couple of times. Eventually, we headed in the right direction. After a quick analysis, I concluded again that, "I know what I am doing."

On our trip out, we had gone up a small hill, and it now was time to go back down that hill. As we approached the crest, I remembered the sharp bend just over the top, but it was too late. I had gunned the engine, which brought us to about 50 mph. This would not have been a problem for an experienced biker, but, as I realized at that moment, "I don't know what I am doing." I leaned into the turn and tried to slow down by using my front brakes. Big mistake! The squeal of the rubber trying to hold on to the road is a sound I never will forget.

A combination of improper braking and loose gravel on the road caused us to "high-side," which means we flipped over the top of the bike. Seven hundred pounds of metal now was skidding down the road in our direction. Miraculously, the bike missed us. As I slid down the road, I could see my wife tumbling, rolling, and, finally, skidding to a halt. By the time I was able to get up and move over to her, she was crying. Unable to move her legs, she was severely disoriented and was having trouble breathing. I only cared that she wasn't dead. About five minutes passed before a car approached, and the driver called 911.

The next few minutes happened so fast. The paramedics arrived and quickly determined she needed serious help. I stood by helpless, watching as they secured her head in between two blocks, put her on a backboard, loaded her into the ambulance, and sped off for a helicopter. All I could do was stand there, bleeding from the comparatively mild road rash on my arms and staring as they drove away. The highway patrol-



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