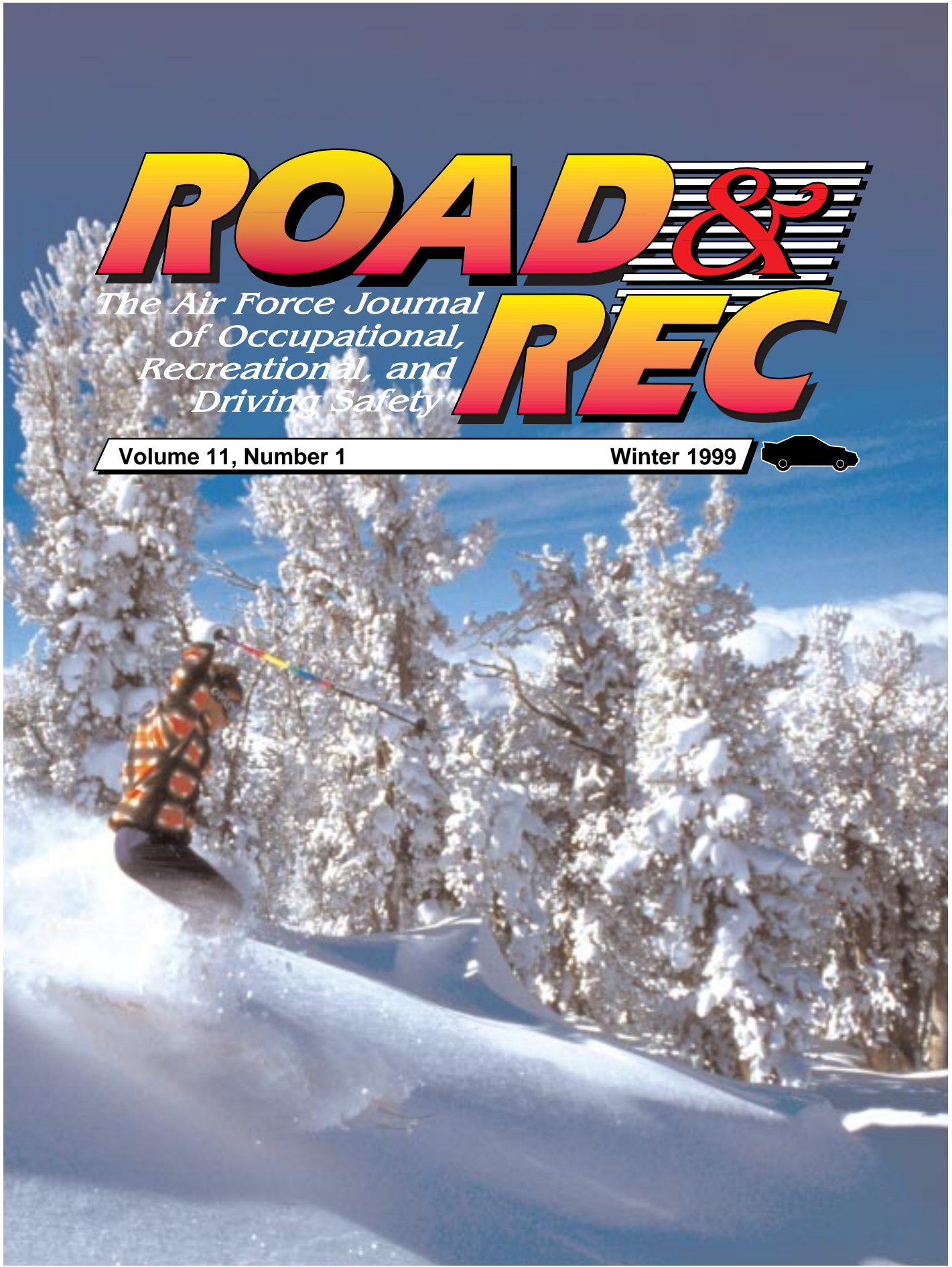


ROAD & REC

*The Air Force Journal
of Occupational,
Recreational, and
Driving Safety*

Volume 11, Number 1

Winter 1999



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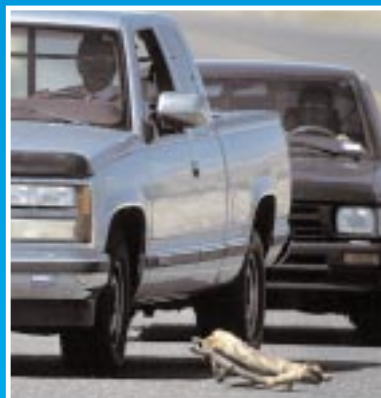
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Personal Protective Equipment— Not Just at Work

AE1(AW) LARRY DENMAN
VAQ-128, Unit 25567

We all hear about Personal Protective Equipment (PPE) at work almost every day. Seems like everybody has a hand in ensuring PPE is worn properly and at the correct time.

But what about PPE at home? Many of the tasks we perform at home are seemingly mindless because we repeat them so often—things like cooking, routine car maintenance, or even changing the household air filters. We learn how to perform these tasks from family and friends. After all, I've never seen a manual for proper car-washing procedures.

During a weekend not so long ago, it took a near mishap to make me pause and ask myself about properly performing repetitive household chores. I can honestly say, prior to last weekend, I had never considered using PPE at home. My once cavalier attitude toward PPE has changed dramatically since the events which I am about to describe.

It was about lunchtime, and I was covered with grease from changing a wheel bearing. I was hungry, and I was trying to get the job done so I could grab a bite to eat before starting on the next item on my "honey-do" list.

I tightened the wheel, but I still needed to bleed the brakes. The plan was simple enough—as my son pumped the brakes, I would turn the bleed valve. I fumbled blindly to find the valve. When I finally put a wrench on it, I discovered it was pretty darn tight. I had my helper turn the steering wheel so I could put my head between the tire and the fender to get a better look at the valve. I wanted to make sure that wrench was seated well before I applied a lot of pressure to break it loose, a trick I learned after busting my knuckles several times.

After a few moments of effort, the valve still wouldn't budge. I couldn't seem to get the right leverage. After repeated changes in my body position, I finally managed to get just the right amount of leverage. I pulled on the wrench again, and as the bleed valve broke loose, the brake fluid did exactly as advertised—spurted out very quickly—right in my face!

As I wiped the brake fluid off my glasses, I realized that I got off easy. The fluid could have easily splashed around the sides of my prescription glasses into my eyes. I had learned my lesson well and quickly. I washed my face and went directly to the garage where I found an unused set of safety goggles. The crazy thing is, I've had those goggles for years.

Now, as I do those repetitive everyday household tasks, I wear the proper PPE for the job. I hope you do. ■

Petty Officer Denman is the Maintenance Training Petty Officer in VAQ-128.



ROAD & REC

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A Hunter's Horror Story

A1C NATE HIER
90th Missile Wing Public Affairs

What began as a normal hunting trip 6 September 1997 in the Thunder Basin Grassland just north of Douglas, Wyoming, ended in near disaster for Capt Jerry Milligan, 320th Missile Squadron missile combat crew commander.

While bow hunting for deer along

the bluffs, Milligan spotted deer on the next mountain over. He started to walk down the mountain. Suddenly, around 10:30 a.m., as he walked along the bluff parallel to the ground, gravel slipped under his foot.

"I didn't fall or anything, but I heard this loud snap, like big branches being broken in half," Milligan said. "I knew right away what had happened."

Sitting down, Milligan pulled up his right pants leg to see his foot flopping in the wrong direction. After ensuring the bones hadn't broken the skin surface and there was

no bleeding, he determined a tourniquet wasn't necessary. He removed the tips from three arrows and used some cord to fashion a crude splint. Trying to remain calm, he adjusted his foot until he found a position he could move in. Milligan slid the last 40 feet to the bottom on his backside.

After reaching the bottom, he determined what he needed to take as he made his way to his truck. Settling on his Global Positioning System (GPS), a compass and his canteen, he again experimented with different crawling positions. He crawled, holding his right leg up

with his left hand to prevent the foot from dangling. He was forced to crawl backwards, using only his right elbow to pull and his left leg to push.

"The first obstacle I ran into was a fence running along the base of the mountain. There was no way I could get over it, so I had to crawl alongside it until I found the end about 200 yards away," Milligan said. "I was making 10, 15, or 20 scoots at a time in between rests to start."

Once around the fence, Milligan used the GPS and compass to locate his truck. He began to crawl up a gravel road. He took his shirt off and wrapped it around his elbow because the skin was quickly being rubbed off.

He reached the top of that road after 4 hours of work. Despite the shirt's protection, he had no skin left on his elbow, and both his leg and his backside were hurting. He was also out of water, and his GPS told him the truck was still 0.8 miles away.

"At that point, I decided I needed to head straight for the road instead of going to my truck. I didn't think I could make it to my truck in a straight line because there were woods and hills between it and me. Going to the road would add at least a half mile to the trip, but I remembered seeing a natural gas facility where there might be water," Milligan said.

Working his way slowly toward the road, Milligan dragged himself through sagebrush, cactus, and rocks, tearing what little skin he had left on his right arm. On his way, he found two metal poles and some boards.

"I thought I could make better time if I made some crude crutches. I made only a few steps before one of them broke, and I fell pretty hard," Milligan said.

After recovering he began to crawl again after saying a prayer for water. His tongue and mouth were swelling from dehydration.

Milligan was down to about five scoots before needing to stop and rest. Most of the skin was gone from

his lower right backside. He pulled his wallet from his left pocket and moved it over to provide a little more support.

"I was hanging onto my wallet in case someone found me. It also helped out as a pad," Milligan said.

While resting, he looked up to the road and saw two trucks. He yelled frantically and waved his arms, but they were too far away to see him.

"I made another 25 or 30 scoots closer to the road, and the two trucks came back from the other direction. I yelled and waved, but I was still too far for them to see me," Milligan said.

Milligan finally made it to the top of a hill at nearly 4 p.m. His tongue and mouth were so swollen it was painful to swallow. Milligan pushed his way down the hill.

"I'd said a prayer for water, but I was thinking it would be at that natural gas facility. Instead, when I reached the bottom of the hill, there was a water trough for animals right in front of me about 50 yards away," Milligan said.

When he reached a small creek created by the runoff from the trough, he threw his GPS, compass, wallet, and watch to the other side and crawled across backward. Once he reached the trough, he filled his canteen from a spout to avoid getting any bacteria.

"I drank the whole canteen and felt pretty sick at first. After that, I filled it three more times and 'leisurely' drank them all," Milligan said.

Milligan decided to rest there and wait in hopes someone would come along. He used the cord from his splint to tie his leg to the trough and another piece to rotate his foot into a bearable position. No sooner had he tied the last knot than he saw a truck approaching.

Randy Scamey and his son, Jake, both from Wright, Wyoming, were driving slowly along the road. It was about 6:45 p.m. when they'd spotted Milligan's truck and figured the hunter might scare some deer down out of the mountains to them. Neither Scamey nor his son knew what they were seeing near the wa-

ter trough at first.

"I waved at them, and they just waved right back at me and kept going. I finally managed to yell, and he turned his truck around, and they pulled up to the trough," Milligan said.

About 8^{1/2} hours after his trek began, the Scameys loaded Milligan into the bed of their truck and drove 20 miles to the nearest ranch. Jake sat in the bed with Milligan holding clothes around him to help keep him from going into shock.

"Every bump we hit on that gravel road made me want to jump in pain. My foot kept flopping around, and the bones would rub together," Milligan said.

At the ranch, they notified the Wright, Wyoming emergency medical technicians. The EMTs made it to the ranch quickly, and after properly setting Milligan's leg, loaded him into the ambulance and met the Gillette, Wyoming, EMTs halfway.

"I'm very grateful to the Scameys and both EMT units. The EMTs were very professional and took excellent care of me," Milligan said.

After reaching the Campbell County Memorial Hospital in Gillette, the doctor determined both bones in Milligan's leg were broken in half about 4 inches above the ankle. He had severe contusions on his right arm, and a large area of skin was missing from his right side.

Milligan had surgery to insert a rod in the leg 15 September.

"I'm very thankful to have survived. I was lucky. I could've saved myself a lot of time and pain if I would've been better prepared. I had a cell phone in my truck, but I didn't bring it with me on the trail," Milligan said.

After this trip, Milligan said he'll do some things differently in the future.

"I will never, ever go out hunting alone again. I'd also recommend that no one else do it either," he said. "I'm fit and strong. I guess I kind of felt invincible, and I know many people who feel like that. I really want to emphasize this could happen to anyone, anywhere. No one's invincible." ■



DALE ECKROTH

Courtesy *Wingspread*, 22 May 98
12th Flying Training Wing Newspaper
Randolph AFB, Texas

Photo by Dale Eckroth

Call it luck. Call it fate. Call it a miracle. For Maj Bill Dean Jr., of the 562d Flying Training Squadron, he's just glad to be alive today following a near-fatal crash on Loop 1604 that completely demolished his 1992 pickup truck and left him crawling to safety.

Dean has flown B-52s, E-3s, T-38s, and T-43s during his 17 years in the Air Force, but nothing, not even all the flight training he's accumulated, prepared him for his brush with death on the highway 23 March.

Dean recalls what happened that day.

"I was driving westbound on Loop 1604 near Green Mountain Road, past Rolling Oaks Mall. It was around 4:45 p.m. I was in the right-hand lane when, all of a sudden, a car came over the embankment from the access road and across the grass onto the highway. It was going at a high rate of speed.

"I moved into the left lane and so did the other vehicles behind me. The car came onto 1604 perpendicular to the traffic and struck the right rear of my truck.

"I was going about 65 mph. The force of the impact pushed my truck sideways, causing it to flip over. Eyewitnesses said my truck flipped over about eight times. I don't remember. I lost count after the first two rolls."

Dean's truck, a huge piece of mangled, twisted metal and shattered glass, came to rest on its roof in the median, while he hung upside down strapped in by his seat belt.

"I reached up and unbuckled my seat belt," he said. "The roof was smashed down all around me, except for a small opening on the driver's side door. I managed to crawl out feet first.

"My first thought was to get out as quickly as possible

because I was worried the fuel tank was ruptured and would catch on fire."

Dean said he didn't realize he was injured at first. All that mattered was he was alive. "I started walking around and stood there looking at the truck," he continued. "I felt something warm running down my face. It was blood. By that time, there were several people around me, including a doctor who wrapped a towel around my head to stop the bleeding.

"Someone with a cellular phone asked me if there was anyone I needed to call. I said, 'Call my wife. Tell her what happened and I'm okay.'"

The driver of the vehicle that slammed into Dean's truck, a 19-year-old woman, escaped serious injuries. The crash, however, caused a major traffic backup on the westbound lanes.

Within 5 minutes, emergency medical service crews were on the scene. Not knowing how serious his injuries were, EMS technicians put a collar around Dean's head and transported him

to the Brooke Army Medical Center (BAMC) at Fort Sam Houston. BAMC is one of San Antonio's designated trauma centers.

In addition to numerous small cuts and bruises, Dean sustained head and scalp lacerations from broken glass that required stitches. He also received a 6-inch gash on his left arm requiring stitches.

Throughout the whole ordeal, Dean remained conscious and remembered most of what had happened. "Once the truck started flipping over, I was pretty much along for the ride," he said. "I credit the tool box I had in the truck bed for preventing the roof from crushing down further.

"When I realized I wasn't badly hurt and I had my eyesight, my first thought was flying. I didn't want to lose my flying status. I love my job."

Dean quickly recovered from his injuries and within 2 weeks was back on flying status as the T-43 chief pilot in charge of 29 pilots in the 562 FTS.

"Luckily, there was no one else in the truck with me," said Dean, who has a 9-year-old son and 8-year-old daughter. "If I hadn't been wearing my seat belt, I would have died. There's no doubt about it. It saved my life. Everything that was in the truck was thrown out—except me.

"I can't emphasize enough how important it is to buckle up. If you don't, you're crazy. Also, make yourself aware of your surroundings. Look in your mirrors to see what other drivers are doing around you."

Dean, who considers himself a good driver, is a little gun shy about driving on the highway nowadays. "I'd rather see the traffic from my cockpit window than from a pickup truck," he said.

Reflecting on that 23 March afternoon, which will forever be embedded in the back of his mind, Dean takes a long sigh and says softly, "I had two things on my side—God and my seat belt. Call it luck. Call it fate. I call it a miracle that I'm alive today." ■



MAJ TRACY DILLINGER
Chief, Air Force Aviation Psychology
HQ AFSC/SEFL

It was Christmas Eve 1985, and I was home in Chicago on winter break from the University of Iowa driving my parent's brand new Ford Escort. The roads were a bit icy that night, but they weren't too bad. As I followed some friends to a holiday party, we came to the intersection of Peterson and Cicero. I was turning left with the protected arrow when a Ford LTD station wagon suddenly plowed into me.

That's the last thing I remember clearly. The rest of my memories are disjointed snatches of faces and sounds; hearing myself tell people at the scene to "call my brother"—an emergency room doctor in Chicago—and the hum of the CAT scan.

Witnesses told my brother that the driver appeared drunk and didn't speak any English. The police didn't obtain a blood alcohol level, and since the driver didn't have insurance and never showed at the court hearings, the case was dropped. For my part, my face was speckled from broken glass, I had a split lip, bloody clothing, a concussion, and 6 hours of "global amnesia" which led to the following conversation with my brother:

"Lance, what are you doing here?"

"You were in an accident."

"Why are you in Iowa?"

"I'm not in Iowa. You're in

Chicago."

"No! In Chicago? Why am I in Chicago? I live in Iowa!"

"You're home on break!"

"Where am I?"

"You're in Swedish Covenant Hospital in CHICAGO!"

"How did I get here?"

"The ambulance brought you here."

"Really? What happened? Why am I in the hospital?"

"We're not sure—you were in an accident. You seem okay, but you can't remember anything!"

At that point, he left the room and took a well-deserved break. He returned 2 minutes later to a very familiar conversation:

"Lance, what are you doing here?" ...etc., etc., etc.

This went on for 6 hours. Finally, I remember a sensation like breaking through the surface of water as I returned to full consciousness. The last "round" of questions finally stuck, much to Lance's relief. I was sent home the next day—no broken bones, no internal injuries, and walking and talking, although the talking was a bit confused for awhile.

My parents were on vacation in Florida. I called them, and using the "bad news, good news" approach, told them something like, "The car's gone, but I'm still here." They were shocked, worried, and grateful, and said things like, "That's why we've got insurance." They got another new car and made sure I understood that cars were replaceable, but I wasn't.

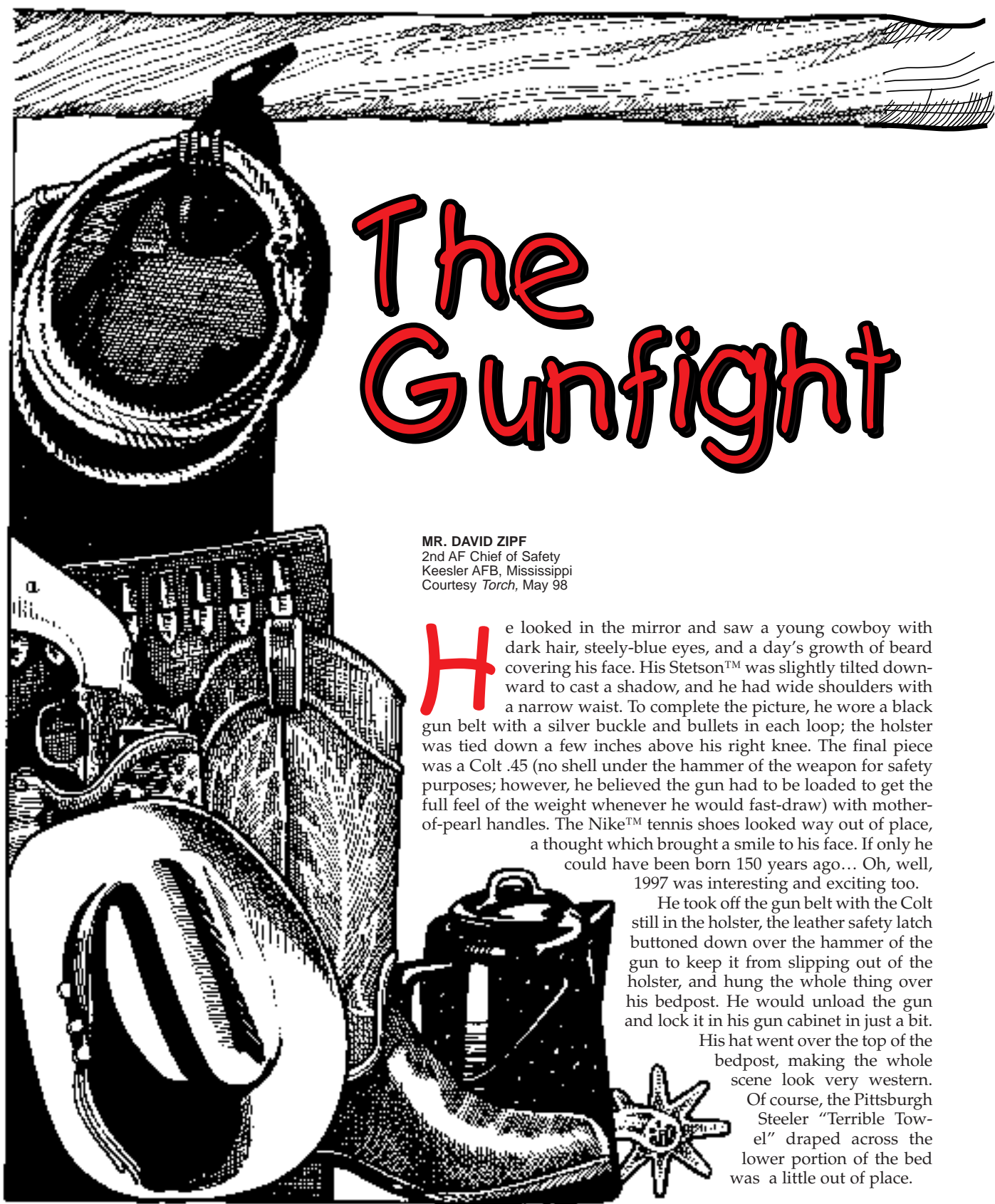
The superficial cuts healed in

about 2 weeks. The confused talk cleared and changed to wonder. The police and emergency medical personnel said the seat belt definitely saved my life. I went to look at the car—which was totaled. The front was gone, smashed clear into the middle of the shattered, crumpled wreck. I went to the intersection again just to look at it. It was like I'd never been there before. Nothing was familiar. I didn't recognize a thing.

It's amazing what happens to your thoughts when you're rattled in an accident like that, and it raises some pretty important questions. I sometimes think about what I would have missed during the last 13 years if I hadn't been here—my family, friends, a doctorate, the Air Force, the Internet, my BMW Z3, climbing Mt. Vesuvius, and touring Carlsbad Caverns.

I went back to school that spring, shedding tiny pieces of glass and being a lot more appreciative of my family, friends, and good health. Also, I made it a point to ALWAYS buckle my seat belt. In the Safety Center, we regularly see reports on fatal and permanently disabling mishaps. That night, I was lucky to have been well trained by my family. I had my seat belt on and survived with one scar that requires a magnifying glass to see.

Buckle up—every time! And make sure you have everyone in your car buckle up because, next time, it may be someone you love who is saved by a seat belt. I'm here to tell this story to you because seat belts saved mine. ■



The Gunfight

MR. DAVID ZIPF
2nd AF Chief of Safety
Keesler AFB, Mississippi
Courtesy *Torch*, May 98

He looked in the mirror and saw a young cowboy with dark hair, steely-blue eyes, and a day's growth of beard covering his face. His Stetson™ was slightly tilted downward to cast a shadow, and he had wide shoulders with a narrow waist. To complete the picture, he wore a black gun belt with a silver buckle and bullets in each loop; the holster was tied down a few inches above his right knee. The final piece was a Colt .45 (no shell under the hammer of the weapon for safety purposes; however, he believed the gun had to be loaded to get the full feel of the weight whenever he would fast-draw) with mother-of-pearl handles. The Nike™ tennis shoes looked way out of place, a thought which brought a smile to his face. If only he could have been born 150 years ago... Oh, well, 1997 was interesting and exciting too.

He took off the gun belt with the Colt still in the holster, the leather safety latch buttoned down over the hammer of the gun to keep it from slipping out of the holster, and hung the whole thing over his bedpost. He would unload the gun and lock it in his gun cabinet in just a bit.

His hat went over the top of the bedpost, making the whole scene look very western.

Of course, the Pittsburgh Steeler "Terrible Towel" draped across the lower portion of the bed was a little out of place.

As he went down the stairs to the living room, he spotted his wife trying to move (actually, doing more than just trying) furniture again.

"Ah, the old migrating furniture trick again. Let's see, either your family is visiting or you've found a new antique piece. Right?"

"No, you're not right—I just wanted a change of scenery. Where were you?" she asked.

"Oh, just upstairs. Here, let me move the stuff, and you can supervise."

"Thanks. Move the couch over here by the marble table. I bet you were practicing your 'fast draw' again. You're good enough to beat Charlie now, John; you'll take first at the rodeo again."

"I hope so, but Charlie is super quick and so accurate. He didn't miss a single target last year."

"You missed only one yourself."

"Yeah, I know, but that was enough. Where's Johnny? With Kit, right?" John asked as he pushed/lifted the couch to the desired spot, knowing it would probably be moved a few more times before his wife was finished redecorating.

"Yes, he and Kit are out in the woods. For a pair of seven-year-olds, they sure have developed a strong friendship. Charlie sure does love his son, and Kit just thinks the world of his dad—just like you and Johnny."

In the woods behind the house, the two boys were in a heated discussion.

"He will too, Kit! Just you wait and see! My dad can beat your dad any day, anytime!" shouted a very irate little boy.

"He didn't last year, did he? And he won't this year!" shouted Kit right back.

"Oh, yeah? Want to bet?"

"Sure! You name it!"

.....
Across the shaded lawn from Johnny's house stood Kit's house. The boys' parents had been friends and neighbors for many years, and the families were very close. Kit's dad, Charlie, was in his garage doing some "gunslinging" practice of his own. He would stand with his feet a little less than shoulder width apart. As his right hand streaked towards the handle of his Colt .45 six-shooter, he slid his left leg a little further out which brought the gun into a natural firing position. His shoulders were slightly hunched, and his upper torso was leaning forward.

But drawing the gun was only part of the contest; the more difficult part was shooting targets as quickly and as accurately as they appeared. He dry fired, using his left hand to cup and steady his right hand, then he quickly reloaded from the bullets in his gun belt. There! Ready for the next targets. Maybe a little faster than last year! John-boy better watch out or he would be

second best again this year.

Charlie took off his gun belt and hung it from a hook in his garage. He usually kept it under lock and key, but he was practicing so much every day that locking and unlocking the gun cabinet got to be a bit old. Besides, no one ever entered "his garage" unless he was in there.

.....
Still arguing in the small wooded area behind the houses, Kit and Johnny finally decided they were wasting a beautiful play day.

"Let's quit fighting and have some fun," said Johnny.

"Okay. Do you want to toss the football or go skating?" In-line skating was one of their favorite things to do.

"Ahh, I don't know; we did that this morning. Let's see if we can get some cookies at your place and some soda at mine," said Johnny.

continued



**There is no
excuse for not
protecting
children who
love to emulate
their heroes,
and you're
heroes to your
children
whether you
know it or not.**

They had figured out if they asked nicely, they could get cookies/candy one day from Kit's house and the next day from Johnny's—same with drinks. The boys went over to Kit's house first.

In the meantime, Kit's parents were next door with Johnny's folks. Of course, the rodeo and the gunslinging contest came up in conversation. Though not as boisterous as the boys, the two men were just as intense within the boundaries of friendly needling. Kit and Johnny happened by just as Charlie was explaining how badly he was going to beat John this year. For young Johnny, this was the last straw. He wasn't going to listen to this kind of stuff anymore.

"That's it! I'm going inside, and I'm going to watch TV! Are you coming or not?" he asked Kit. At Kit's nod, they both went inside.

"Wait here; I want to show you something."

A few minutes later, Johnny came into the newly arranged living room (which really hadn't changed too much), wearing his dad's Stetson™ and gun belt with the Colt .45 still in its holster. The belt, of course, was too big and kept slipping down whenever Johnny didn't hold it tightly.

"Wow, Johnny, that looks great!" exclaimed an admiring Kit. "But funny, too," he laughed, as the gun belt hit the floor. "I know, let's use our gun belts and your dad's gun!"

"No way! You get your own gun and meet me in the woods in ten minutes, you dirty sidewinder, you!"

"I'll be there, and we'll see who the better man is, you varmint, you!" shouted Kit, fully into the game now. He knew just where his dad had been hanging his gun belt in the garage; it would be a piece of cake to get the Colt.

Ten minutes later in the woods, Johnny and Kit squared off, the Colt .45s just barely staying in their smaller holsters.

"Okay, here's the rules," said Johnny. "We get ten feet apart, and on the count of three, we draw. Did you make sure your gun is unloaded?"

"Yeah, Dad was dry firing, so I know there're no bullets in his gun. How 'bout you?"

"You got to be kidding! My dad is always telling me 'It's the unloaded gun that kills.'" Johnny rolled his eyes and grasped his throat to dramatize the point. "He wouldn't allow a loaded gun in the house. Are you ready?"

Both boys held their arms out to the side, hands above the handles of their guns, just like they had seen their dads do many times.

"Okay, one...two...three..."

The sound of the gunshots broke up the good-hu-

mored argument between the two old friends. They glanced at each other and began to run toward the woods. Both families would be in mourning that night and for a lifetime of days and nights to come. Many "why's" would be asked, and each parent would agonize over his carelessness.

.....
Weapons must be treated with respect—which means they must be kept under tight control, locked up in cabinets little folks can't get into. They shouldn't be left hanging from gun belts or on top of beds or anywhere little hands could find them. Ammunition should be separated from the weapon for an extra degree of safety.

There is no excuse for not protecting children who love to emulate their heroes, and you're heroes to your children whether you know it or not. You set the examples they follow. For instance, you may insist your children wear their seat belts, but if you don't, they won't when they are adults—because they want to be just like you.

Lock up things that can harm or kill your sons and daughters. ■

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LCDR ERIC G. PETERSON
 Courtesy *Safetyline*, Mar-Apr-May 98

"Yep, there it is," he announced. "You've got a piece of steel in your cornea."

When I'm working on cars, I can forget about the stresses of flying, my ground job, bills—just about everything. It's my way of relaxing. However, one Monday morning, I had more stress than relaxation.

I was installing a new carburetor on my car's intake manifold, and I had to enlarge the manifold opening. Just what I needed—a challenge. I got out my high-speed grinding tool, and with ear plugs, breathing mask, and face shield, I was ready.

As I worked, steel dust started building up and obscured my carefully scribed marks. I didn't want to brush away the steel, since I had used a china marker that would smudge. So I lifted up the face shield, lowered my mask, and blew on the dust. Whoosh! A dust cloud flew into my eyes.

"Great, just great!" I thought. (Actually, I thought some other choice words, but I won't use them here.) I went inside the house and rinsed my eyes. The right one seemed a little scratchy, but it wasn't too bad. I finished working on my car and cleaned up.

The next day, I felt fine until I was driving home from work, and I got a splitting headache. All night long, my head ached and my right eye teared. When I looked in the mirror the next morning, I knew I was in trouble.

Our squadron's flight surgeon ran the standard tests, then hooked me up to some of his shiny, metal ocular equipment. After applying a few drops of anesthetic and fluorescent dye, he looked into my eyeball.

"Yep, there it is," he announced. "You've got a piece

of steel in your cornea."

He tried to remove it with a wet cotton swab, but no joy. "I'll be right back."

In a few minutes, he returned—with a needle. "It's the only way to remove it," he said matter-of-factly.

Hovering over my upturned head, he forced open my eyelid and lowered the needle toward my right eye. "Okay—got it!"

I was glad it was over, but my euphoria was short-lived. He looked through a stereoscope at my bloodshot eye. "You've got a rust ring," he declared.

The steel had been in the wet environment of my eye long enough to start rusting, which can cause a reaction and permanent corneal scarring—not a good thing for anyone, especially a pilot. I was whisked off to a nearby university hospital where ophthalmologists with "proper" equipment waited for me.

I was led into a room filled with ophthalmic equipment and introduced to a doctor who put me through the anesthetic-fluorescent-dye-stereoscope maneuver again. "And how did this happen?" he asked.

He smiled and shook his head as he listened to my story. Then he left and returned with another doctor who said, "I'm here to hold your head during the procedure." I wondered what sort of procedure would require someone to hold my head.

The first doctor assumed his position behind the stereoscope and the other stood behind me, gently smashing my face into the contraption. They brought out a little battery-operated device that looked similar to my high-speed grinding tool—the irony wasn't lost on me. "This is a very small drill. We're going to use it to clean all the rust out of your cornea," one explained while smiling sweetly.

Visions of the movie "A Clockwork Orange" danced in my head. A glorified drill bit was going to be used on my eyeball? Now I understood the need for a helping hand to hold my head in place.

Bzzzz—the drill started. "It's not as bad as it sounds," one of my doctors assured me.

"That's not true," I croaked.

I watched (did I have a choice?) as he deburred the surface. It was sort of like watching something from underwater, but with sound effects.

After they finished, they called in their department head to come look at their handiwork. "Looks pretty good," he said, "but gimme that drill..."

"Oh, no," my mind screamed, "not again!"

During the ride back to the base, I had plenty of time to relive the whole nightmare and think about what I did wrong. Why didn't I just use an old toothbrush to remove the dust? Why did I spend all that money on protective gear if I wasn't going to wear it? How would I explain this to my CO? ■

Editor's Note: Been there, done that, got the T-shirt. Eye protection is not just for on the job, it's also for home and hobby use—especially when grinding metal. And while protective eyewear can occasionally be an annoyance in certain situations, it's not half as annoying as a drill bit in the cornea.

Seeing

RED-

AMERICA'S FATAL INTERSECTIONS



BOB VAN ELSBERG
Managing Editor

Photos courtesy of Lori Ann Lopez,
Albuquerque Police Department

I'd been warned about red light runners in Albuquerque, but I'd thought the warnings were exaggerated. As I braked to a stop at the intersection of San Pedro and Gibson during my first weekend in town, I saw an old pickup to my left. The driver stopped, looked left, then right, and then drove right through the red light. I was flabbergasted.

However, this driver was far from the worst I'd see in the next few years—at least he stopped. Most red light runners in Albuquerque blow through the intersections without a pause. I've had friends who were hit and injured by these drivers.

This isn't just a problem in Albuquerque. A recent report released by the Insurance Institute for Highway Safety documents a significant increase in these accidents and the resulting fatalities. As drivers simply opt to ignore traffic signals, they are killing themselves and others with an alarming frequency.

How Big Is the Problem?

Red light runners cause an estimated 260,000 crashes each year and more than 800 fatalities. In addition to the fatalities, red light runners account for 5 percent of all injury crashes nationwide and 7 percent of injury crashes on urban roads. More than any other type of crash, red light running is likely to injure those involved. And the red light running problem is growing. Between 1992 and 1996, red light running fatalities jumped by 15 percent compared to a 6 percent rise in other types of fatal crashes.

Who Are These Drivers?

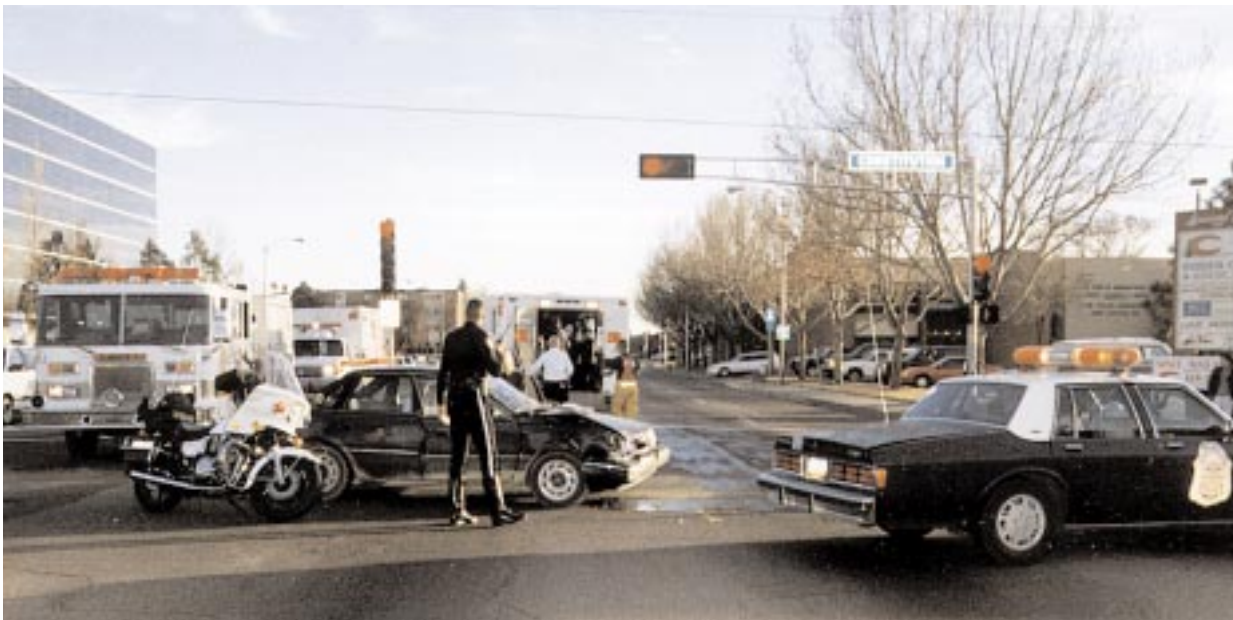
The Institute's study found that "red light runners involved in fatal crashes are a deviant population, more likely than nonrunners to be alcohol impaired and to have invalid licenses and prior violations." The study also revealed that red light runners tend to be younger, less likely to use seat belts, and have poorer driving records than drivers who stop for red lights. Alcohol played a role in many red light running collisions. More than half (58 percent) of nighttime crashes and 12 percent of daytime accidents involved red light runners under the influence of alcohol. Many had prior DWI convictions.

Not all red light runners, however, neatly fit this description. One significant group is elderly drivers—those 70 years old and up—whose skills may be impaired due to poorer vision and slower reactions. The majority of these drivers are involved in daytime collisions. They also suffer the highest fatality rate with nearly three out of four dying in these accidents. However, regardless the age group, red light runners and their passengers wind up being the fatalities in more than half (55 percent) of these crashes.

Where Is the Greatest Danger?

As might be expected, the majority of fatal red light running crashes happen in the city. Those cities having populations of more than 200,000 accounted for 34 percent of these fatalities between 1992 and 1996. Of the 78 U.S. cities with populations of more than 200,000, the following list shows the 10 with the highest and lowest red light running fatality rates.

Rate Per 100,000 Residents	
Highest Rates	
Phoenix AZ	8.11
Mesa AZ	7.08
Memphis TN	5.45
Tucson AZ	5.11
St. Petersburg FL	4.95
Dallas TX	4.89
Fresno CA	4.89
Birmingham AL	4.80
Albuquerque NM	4.77
Louisville KY	4.40
Lowest Rates	
Oklahoma City OK	0.21
Pittsburgh PA	0.28
Columbus OH	0.31
Honolulu HI	0.45
Cincinnati OH	0.56
Arlington TX	0.68
Boston MA	0.73
New York City NY	0.85
Rochester NY	0.87
Akron OH	0.90



One of every eight daytime crashes involves a red light runner.

continued on next page



All too often innocent drivers and their passengers are the victims of red light runners.



The peak hours for red light running accidents for most adult drivers are between 10 p.m. and 2 a.m.



More than half of all nighttime red light running crashes involve drivers under the influence of alcohol.

When Is the Greatest Danger?

More than half (57 percent) of all fatal red light running crashes occur between 6 a.m. and 6 p.m. There are, however, certain times of the day and night that represent a particularly high risk to drivers. The peak hours for teenagers and adult drivers ages 20 to 69 was from about 10 p.m. to about 2 a.m. After dropping off during the early morning hours, the accident rates for adult drivers begin climbing with the morning commute, rising noticeably between 7 a.m. and 10 a.m., then again during the afternoon between 1 p.m. and 3 p.m. Because elderly drivers have different driving patterns, their peak time was from about 10 a.m. to 2 p.m.

What Can Be Done?

The Institute's report suggested four things that could

help reduce the problem of red light running.

First, making the signal lights brighter—something that would particularly help older drivers—was proven effective in reducing crashes in London, England.

Second, making yellow lights longer should reduce the number of instances where drivers inadvertently run red lights.

Third, stricter law enforcement—aided by red light cameras that automatically photograph the license plates of red light runners—has also proven effective. An Institute study found that red light running in Oxnard, California, dropped 42 percent after cameras were installed at nine intersections. Because many red light runners are driving illegally on invalid driver's licenses, Arizona is taking the red light camera program one step further. There, cameras also photograph the vehicle

More than any other type of crash, red light running is likely to injure those involved.

from the front to identify these motorists. In addition to Arizona, nine other states and the District of Columbia are using cameras to catch red light runners. Those states are California, Colorado, Delaware, Illinois, Maryland, New York, North Carolina, Virginia, and Washington.

Finally, many automakers are helping to protect the victims of red light runners by providing side-impact air bags. These air bags, along with better structural reinforcement on vehicle sides, can help reduce injuries in red light running crashes.

What Can You Do to Protect Yourself?

Obviously, you can't prevent others from running red lights, but you can lessen the likelihood of being struck by a red light runner. Mr. Edward Turner, owner of Turner School of Driving in Albuquerque, New Mexico, suggested exercising caution at all intersections.

"When the light turns green, always count to three, then look left and right to make sure you're clear before pulling out," he advised. "The average driver will try to hurry through the yellow light and sometimes ends up running a red light instead." The innocent victim, he explained, is all too often also in a hurry. "It's usually the person who takes off as soon as the light turns green who gets hurt."

In addition, there are things you can do to avoid accidentally running a red light, according to Mr. David McGinnis, owner of McGinnis School of Driving in Albuquerque.

"As you approach any intersection, always rest your foot on the brake," he said. McGinnis explained that being ready to brake reduces reaction time, giving you a

better chance of stopping safely. Not only can this help keep you from accidentally running a red light, it can help you stop more quickly should someone else be running a red light as you approach the intersection.

And what about the "should I, or shouldn't I?" decisions you have to make when the light has turned yellow?

"If you have enough time to think about whether or not to stop, you have enough time to stop," McGinnis said. ■



No “Yard Sales” Here!

BOB VAN ELSBERG
Managing Editor

All photos, excluding top photo
this page, by MSgt Perry Heimer

“Yard Sale”—A spectacular crash that leaves the skier’s poles, hat, skis, etc., strewn along the mountainside. Not the way to end a downhill run.

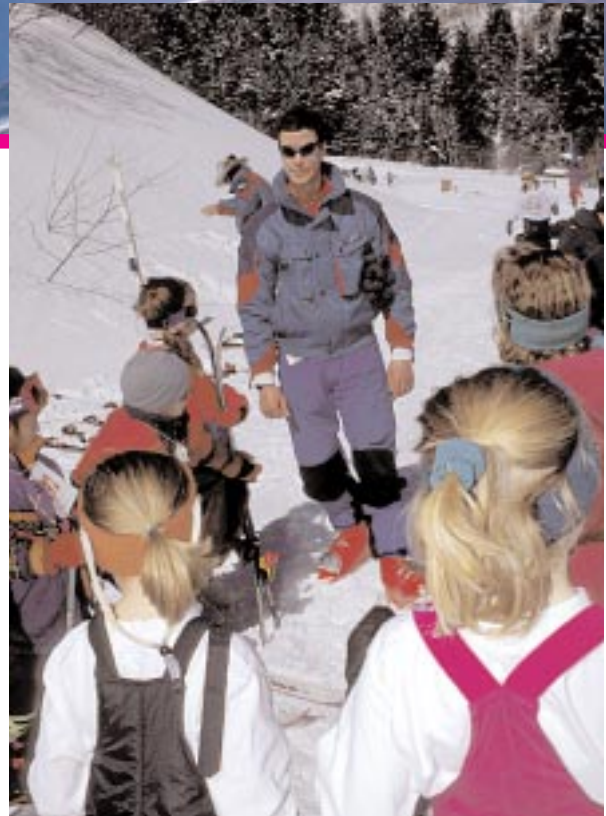
The brilliant, purplish-blue sky was just as clear as the air was crisp atop the Sandia Mountains just east of Albuquerque. The downhill slope was dotted with orange, blue, yellow, green, and red as brightly clad skiers swept downhill in the brilliant sunshine. At the base of the slope, student skiers moved slowly—sometimes clumsily—as they struggled to maintain their balance and gingerly move along on the hard-packed snow. Before the end of the day, most would experience the thrill of gliding effortlessly down the slope on a glistening blanket of white. Or at least that’s what Bill Leinneweber has in mind for them.

Leinneweber, technical director for the Sandia Recreational Area Ski School, has been teaching people to ski for more than 20 years. He knows how to take someone who has never been on skis and help them gain the skills and confidence to tackle the slopes. He starts them off with his “Never-Ever” ski training—a full day’s beginner’s lessons, rental of the needed equipment, and a half-day lift ticket. All they have to do is show up and learn.

“From the moment you greet them, you get to know your students—know their profile in life and how you should approach teaching them,” he said. “We start out without the skis on, doing some boot exercises, so they can figure out what the boot can and can’t do for them.”

He explained boot exercises.

“It’s going through the rudimentary movements in skiing.” He described those as “being able to twist your



Beginning skiers start their training in a level area at the bottom of the slope.

foot, get your foot up on the side and ‘edge’ your ski (for turning), and move yourself up and down and side to side—movements you need to have in skiing.” The “up-and-down” is particularly important, he explained, because the skier’s legs and knees function like shock absorbers, helping skiers stay under control as they go over the snow. “If your legs are straight, they don’t work as well as if they are bent and in a muscular position.”

The next step in the learning process is to put on a single ski.

“We start with one ski—we call it ‘scootering’—so that they can start to get the proper movements going without the fear of sliding away and not being able to stop themselves,” he said. He explained it’s like riding a



Boot drills help beginning skiers get used to their ski boots.

skateboard. Using a level area, the students practice turning in circles and edging the ski while still having one foot free so they can easily stop. "We try to take the fear factor out of it right from the very beginning."

He explained they start out on a level area to prevent sliding, then work up to a gentle slope to get the sensation of a ski moving over the surface of the snow.

"Next we put on both skis and practice doing straight runs forward and backward to get used to the skis sliding," he said. "Then we start to move our skis in a 'V' shape—tips together and tails apart—or a 'wedge' as we call it, which gives a skier a wider base of support. We're trying to build on their balancing skills. Wedging tends to edge the skis automatically as the skier's feet spread away from their bodies."

Once they've learned how to use the wedge to control their speed, he teaches them to turn their feet together so

that they can turn on the snow. "Once they're able to turn and stop in both directions, we'll progress to the chair lift," he said.

Leinneweber explained that it's important for skiers to listen to the lift operator's instructions. Because the chair lift is constantly moving, careful timing and proper technique are required to get on and off without having an accident. Also, it's not a playground swing, so riders need to sit still while they're riding. When they get off, they need to quickly move to the side because another chair will be coming up behind them.

"The chair lift is a big piece of machinery, and people need to be responsible about their own actions," Leinneweber said. "We spend some time talking to them about it and how to conduct themselves, such as when there is a crowd, who's turn it is, and that sort of thing."

The students get off the chair lift at the first station to begin honing their skills on the bottom half of the slope. About 1,000 feet long and dropping about 150 feet, the slope is wide and relatively smooth to give the students plenty of room to maneuver. Leinneweber and the other instructors work with the students, demonstrating the moves they want them to make, then giving each skier a chance to practice the maneuver. A lot of times the execution—especially the first time or two—is less than perfect, so the students are taught to sit down to one side or the other if they begin to slide too fast and lose control. Throughout the process, the instructor watches the students closely. Leinneweber understands people learn at different rates and that the process needs



"Scootering" helps students learn to turn and perform other basic skiing movements safely.

to be gradual.

"Anytime you add something new to their program, you want them to be able to attain *that* skill while build-



Instructors are always nearby to help beginning skiers.

ing on what they've already learned," he said. "You don't want to add too much to the person too quickly or else they get overloaded."

He went on, "Usually what gets in the way of a beginner's learning process is the fear factor—getting over the fear of either falling down or going too fast. If they spend enough time learning to control their speed, turn, and maintain control, it tends to alleviate that fear." Getting over that fear can actually be an important part of maintaining control on the slopes, Leinneweber explained. "If they're leaning back too far, or if they're leaning too far uphill, the skis quit working for them. They're not staying balanced, and that's usually caused when they're afraid of the hill."

With ski training, most beginners can master the skills needed to come down the bottom half of the slope in a single day. More athletic people tend to have an advantage, according to Leinneweber, because their greater self-confidence helps them pick up the skills more quickly. And they don't have to stop with just one day's training. Those who want to can come back for a second and third day to continue building their skills. During the second day, they can ride the chair lift all day long and spend more time mastering the fundamentals. The third day they can ski from the top of the run, tackling more challenges than on the lower part of the slope. Also, for those who want to really master the sport, there are 3-, 6-, and 9-week courses where the student spends a day each week skiing with the same instructor.

Like most sports, it helps to be in good physical condition before you begin with the training.

"The more you are in shape physically, the better off you'll be out there," he said. He explained skiers need to be able to twist their feet in and out, roll their feet up on their sides, and be able to move up and down. "If you

can't do those physically, you're going to have a tough time trying to ski."

For those who do want to learn to ski, ski schools offer the advantage of providing the necessary equipment—such as boots, skis, and poles—without the students having to invest in these things separately. The students are, however, responsible for dressing properly. Leinneweber suggested they wear clothes that are fairly waterproof and that will keep them warm and dry. He also suggested students dress in layers so they can remove some of their garments as it warms up later in the day.

In addition, "You definitely want to have sunglasses on," he said. "This is a high alpine environment, and you're closer to the sun, so sunscreen and sunglasses are very important." He added, "If it's a snowy, windy, blustery day, goggles will make you feel a lot more comfortable."

For new skiers who are thinking about buying their own equipment, Leinneweber offered the following advice.

"Definitely talk to the shop people," he said. "Early season and late season there are some very attractive packages that include everything you'll need—skis, boots, bindings, and poles." He advised new skiers to avoid the stiffer, slimmer racing skis in favor of those that will make it easier for

the skier to maneuver. "These days, most of the market is going toward the shaped skis. They've got a narrower waist and a little wider tip and tail which helps you to turn."

As focused as Leinneweber is on making sure new skiers enjoy the sport safely, he observed that experienced skiers also get into trouble on the slopes. He brought up some of the mistakes they occasionally make which can lead to injuries.

"Skiing above their ability level, skiing when they're fatigued, skiing in places they shouldn't—like out of bounds—and skiing in the trees," are mistakes that sometimes overconfident skiers make, he said. Noting that skiers don't do well in collisions with trees, he commented, "We try to ski in the places BETWEEN the trees." He also observed that, in one respect, skiing can be like driving. With other skiers and trees potentially in a skier's path, it's wise to look well down the slope, especially as speeds build up.

Leinneweber's overall advice for safe skiing was sim-



Skiers need to act responsibly when riding the chair lift.



Skier's Responsibility Code

- Always stay in control and be able to avoid other people or objects.
- People ahead of you have the right of way. It is your responsibility to avoid them.
- You must not stop where you obstruct a trail or are not visible from above.
- Whenever starting downhill or merging into a trail, look uphill and yield to others.
- Always use devices to help prevent runaway equipment.
- Observe all posted signs and warnings. Keep off closed trails and out of closed areas.
- Prior to using any lift, you must have the knowledge and ability to load, ride, and unload safely.

▲ By the end of the day, most student skiers can safely ski their way down the beginner's slope. ►

ple enough.

"Always ski under control and ski to your ability level," he said. "When you're out on the hill, go by the Skier's Responsibility Code. Know your own limitations and stay on the trails that are appropriate for your ability." He added, "Always ski with ski brakes or retention straps on your bindings. When riding a lift, you should have the knowledge and ability to get on and off and ride safely."

On the slopes, he pointed out, there are "rules of the road" for skiers. "Always stop where you can be seen from above," he said. "When merging onto a trail, always look uphill. It's just like merging onto the freeway. You can't just jump out there—you have to blend into the other traffic."

"Skiing is a dynamic, fun sport," Leineweber stated. "If people obey the rules and know their own ability levels, there should be no problems out there." ■

Skiers who want to, can get additional training to enable them to tackle more challenging runs.



Tripped Up b

Courtesy "Safety Times"

**The stockings were hung by
the chimney with care,
But the shoes that they
nestled in
sat on the stair.**

Yes, Mary knew the shoes belonged in the closet, but they were wet from the walk to the church, and it was already past midnight. The children would be up soon opening their gifts. She would move them before the morning's activities. Anyway, they were off to the side of the step.

When the alarm in little Kristin's head went off Christmas morning, she bolted down the stairs before the sun was up or the lights were on. She stepped on those soggy shoes, lost her balance, and tumbled onto the vestibule floor. She opened her presents from Santa, but only after a visit to the emergency room to set her broken wrist.

Next to motor vehicle accidents, falls are the leading cause of deaths in the United States. They are the leading cause of accidental deaths in the home. According to the National Safety Council, 8,500 people died from falls in their homes last year.

Anyone is susceptible to a fall. However, with forethought, most falls inside the house can be prevented.

On the Stairs

- ❖ Maintain treads, risers, and carpeting in mint condition.
- ❖ Keep stairs clear of obstructions, **always**. Never use them as a temporary shelf.
- ❖ Stairwells should be well lighted. Place a light



switch at the top and bottom of the stairs.

❖ Don't walk the stairs in the dark. Avoiding a minor inconvenience to others could result in a major one for you.

❖ Install solid handrails on all stairways, regardless of their length or frequency of use. One rail is a necessity, but one on each side is ideal.

❖ Use the handrail when you are walking the steps.

❖ Be sure you can see where you are stepping as you climb the stairs. Do not carry bundles that can obstruct your vision. You need to see each step. Make two or three trips if necessary.

❖ Use a laundry bag to carry laundry up and down stairs. It keeps your load intact and manageable and lets you tend to the business of your safety.

❖ Install safety gates at the top and bottom of stairs whenever there are small children in the house.

by Bad Habits



- ❖ If a door is located at the bottom of a stairway, be sure it is not made of glass.
- ❖ Do not climb stairs in your stockings or while wearing loose slippers. Be extra careful when wearing high heels and clogs. Look for tread on the bottom of shoes you wear around the house.
- ❖ Paint a white strip on the edge of each step.
- ❖ Never use throw rugs near stairs. (Tape or tack them to the floor wherever they are used.)
- ❖ Keep children and pets off the stairs.

In the Bedroom

- ❖ Do not bound from bed the instant you wake up. Sit on the edge of the bed to get your bearing and your balance.
- ❖ Tidy the bedroom before going to sleep. Clear a pathway between the bed and the bathroom or doorway.

- ❖ Keep a lamp by your bed. If that's not possible, put a flashlight on the bedside table.
- ❖ Keep all dresser drawers closed when they are not in use.

In General

- ❖ Never stand on a chair or box for hard-to-reach items. Buy a sturdy stool.
 - ❖ Move cautiously. Don't rush through the house to answer a telephone or doorbell.
 - ❖ Arrange furniture so that walkways are as wide as possible.
 - ❖ Secure loose wires and cords, preferably around the edge of the room.
 - ❖ To reduce shoe clutter, place a family shoe rack or box by the front door.
 - ❖ Wipe up spills immediately.
 - ❖ Put a bell on your pets.
 - ❖ Install sturdy railings on balconies and porches. Never trust a railing to support your entire body weight. Make the openings small so a young child cannot fall through.
 - ❖ Never let children sit or stand on windowsills. Windows in rooms with small children should have guards that can be readily removed in an emergency.
 - ❖ Move chairs and other furniture away from windows where young children might use them to reach a window.
- During this fiscal year, more than 40 Air Force members have been injured in falls which have occurred either at home or in billeting or at hotels at TDY locations. Those mishaps have been caused by tripping over pets, unsure footing on stairs, and, in one case, by leaning on a second-floor balcony rail which gave way. ■

Happy to Be **ALIVE!**



TSGT RAI MILLER
916th Air Refueling Wing

Photo courtesy of author

It was still dark out that Sunday morning as I left for weekend duty with my Reserve unit. For once, I had managed to leave the house a good half-hour before I “NEEDED” to, heeding the weatherman’s warning there might be some patchy fog. I was on an old country highway and had run into a bit of fog, but as the miles went by and I got further south, the fog disappeared. I crested a small hill at about 55 to 60 mph and suddenly saw something in my headlights—**AN ANIMAL!** I instinctively swerved the car hard to the left.

When I regained consciousness, I realized I had lost somewhere between 10 and 25 minutes. My first thought was, “Do I have any broken bones?” I couldn’t remember anything that had happened after I saw the animal. I was hanging upside down from my seat belt and shoulder harness. My glasses (I’m severely nearsighted) were missing, and it was still dark out. So I turned off the engine (which was still humming along happily) and left the headlights on.

I didn’t seem to be bleeding anywhere, but I knew I was probably in shock, so I knew I needed to watch out

for signs of problems. Then I smelled something funny. Was it oil or gas? I thought, “Uh oh! I need an escape route!” I felt around for the window crank and rolled it open. I then began feeling around for my glasses and quickly realized the windshield was shattered. As I reached around in the car for my glasses, little shards of glass were cutting into my right hand. Then I felt something familiar—“Found ‘em!”

With my eyesight restored, I could see my ‘89 Nissan Sentra was probably totaled. I put my left hand against the roof to brace myself, turned my head, and then released my seat belt and harness to plunk down on my right shoulder. I crawled out the window, stood up, dusted myself off, and for the first time I got a really good look at what I was in. In gratitude, I raised my hands toward the sky and exclaimed a heartfelt “Thank you!”

My car had apparently swerved into the left lane and then back into the right lane. My car then skidded sideways into an approximately 4-foot-deep ditch, bounced against the far side, zigzagged along the ditch until the front left fender struck something, then flipped over. Since the ditch was deep and the grass was so tall, the upside-down car appeared to be only about 3 feet tall. A tie rod was sheared off, and the front left tire was per-



pendicular to the rest of the car. All of the quarter panels were also badly damaged.

As the sun came up, I grabbed my helmet bag and found the cellular phone my husband had insisted I carry. It still worked! I called my commander's answering machine and explained I had been in an accident and that, although I was fine, I wouldn't be able to make it in. Then I called my husband and told him the news. He told me he was glad I was all right and reminded me that he had slept on the couch after fishing all night so as not to disturb my 7 hours of sleep. He'd only had 3 hours of sleep so I told him to stay home—we didn't need another accident.

About that time, I had wandered back up the road to see what I had nearly died for. It was a half-crushed 8-week-old kitten, still in the process of dying. Its mother had pulled it to the side of the road. I felt horrible and helpless as I watched it die, but I had done everything I could.

I was still on the phone with my husband when a volunteer fireman showed up. After I told him I was the only person involved in the accident, he used his cellular phone to call the Highway Patrol. I told my husband I'd be okay and I'd handle things, now that there was someone else to keep an eye on me in case I was injured and didn't know it yet. I told him, "I'll call you if I need you."

As the fireman and I waited, every single passerby stopped to offer assistance. They were shocked to find out I had crawled out and walked away from the wreck.

The sheriff was also impressed that I had survived. He believed me when I told him what happened because the evidence matched what I had said. I didn't receive a ticket, and everyone was kind. The tow truck driver flipped my car upright, and we all realized I'd been very fortunate.

Twenty years ago, this would have been a fatal car crash, but I am from a generation trained to wear seat belts. My seat belt, and a well-constructed car, saved me from an accident caused by my own reflexes. If I'd had the time to recognize what kind of animal was in the road, I probably would have hit it. But I didn't have time. I didn't know if it was an infant or a deer or a bull (it *was* in the country). In situations like this, all you can do is thank God for the person who invented seat belts.

When the tow truck driver got me and my wreck back home, I hugged my husband so hard I'm sure I bruised him. I was grateful that I could hug him. My injuries were limited to a scratch from searching for my glasses and a sore shoulder from getting loose from my seat belt and shoulder strap. Now when people ask me how I am, I just smile and say, "I'm happy to be alive!" ■

What You **Can't See** Can Hurt You



BOB VAN ELSBERG
Managing Editor

A while back, I read an interesting article by a California Highway Patrolman on what he called “high horizon driving.” He pointed out how important it is to look far down the road so you’ll be prepared to avoid accidents, debris, and other dangers. It didn’t take a rocket scientist to see his idea made sense. Still, his point seems to be lost on a lot of people—especially tailgaters. I recently saw

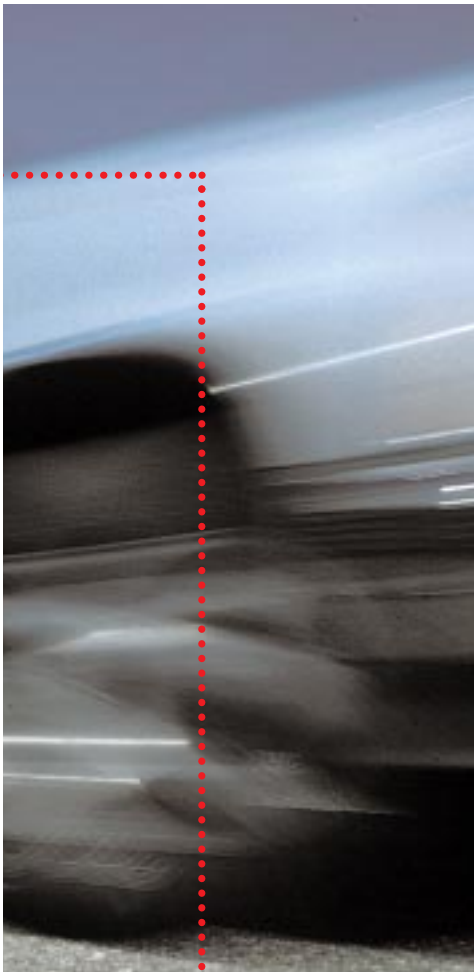
that demonstrated rather graphically on a state highway.

Driving southbound in the left-hand lane of the highway, I saw a 3-foot-long piece of angle iron lying in the right-hand lane ahead. That didn’t surprise me. I’ve seen wooden pallets, mufflers, and other debris convert roads into impromptu slalom courses.

What really piqued my interest was what was going on in the right-hand lane. Just a short distance back was a car with two others bunched up close behind it. Neither of the two tailgaters were allowing more than a single car length of following

distance—and this at 60 mph! Having no time to warn them, I kept pace in the left lane a short distance ahead of this threesome and watched. The driver in the lead car could easily spot the angle iron in the road. The two tailgaters, however, were in for a rude surprise.

As it turned out, the lead driver didn’t react until the last second. However, she did veer far enough to the right to barely miss the angle iron. By contrast, the tailgaters behind her had no time to react. The angle iron went under the first tailgater’s left-hand wheels, spun sideways, then went under the second



tailgater's car. I couldn't tell if it popped up and hit the car's underside—but I wouldn't have been surprised if it did. That often happens when a car hits debris in the road.

Fortunately, none of the cars were seriously damaged or lost control. I wondered, however, what would have happened if they'd hit a cinder block or section of steel girder instead—items construction trucks have occasionally left on the roads. There would have been serious damage to the tailgating vehicles and possibly a bad accident.

That got me to thinking. I asked myself, "Do I allow enough following distance to see AND dodge road debris in front of me?" That's not the same as, "Do I allow a safe interval behind the car I'm following?" You see, short of hitting a stopped 18-wheeler, the car ahead of me is not likely to stop instantly. There will be a certain amount of time and distance involved in stopping.

By contrast, road debris is normally immobile. It doesn't warn you with brake lights, nor does it

move forward, creating more space for you to stop. By the time you've spotted the debris, you're already rapidly running out of time and space to avoid it.

Imagine your situation if you're tailgating and something dangerous is in the road ahead. The driver of the car in front of you may see the obstacle in time to dodge it, but you won't. Whatever the object is, you're going to hit it at full speed. What might that be like? Try envisioning a sudden blowout from a punctured tire, no brakes because of broken brake lines, or not being able to steer because the rack has been damaged. Any of these could happen.

That should be a sobering thought, especially if you're tempted to crowd the back bumper of the car ahead of you. Before you become "turnpike toast," ask yourself: "Can I see far enough ahead to avoid an obstacle in the road?" If you can't, then ask, "Is being in a rush worth the surprise I might get?" ■

Photos by MSgt Perry Heimer



Tailgaters may often not see obstacles on the road in time to dodge them.

Letters to the Editor



Dear Editor

Your magazine, *Road & Rec*, is a good publication, but people who read driver safety magazines are probably safety conscious already, and you end up “preaching to the choir.” As an Army physician assistant in Kuwait, I can tell you the most devastating problem we have is motor vehicles. While most of the highways are well paved, some of the secondary roads are unpaved, or worse, paved in places and not in others. The poor quality roads, coupled with a lack of speed limits, can be hazardous. Four recent accidents stand out:

Accident No. 1. Two Army and two Air Force enlisted personnel were driving to a weapons range when the pavement suddenly ended. Their sport utility vehicle got sideways in the loose sand and rolled one time. Three personnel were wearing their lap and shoulder belts. The fourth passenger in the rear seat did not have his seat belt fastened because it was entangled in the seatback release mechanism.

The two restrained passengers were uninjured. The restrained driver suffered minor cuts and a mild concussion. He was treated and released within days. The unrestrained passenger suffered a broken back—a wedge compression fracture of the second lumbar vertebra. Fortunately, the spinal column was intact; however, he was med-evaced to the States the following week for further therapy.

Accident No. 2. A Chevrolet Suburban carrying four passengers went off the road and rolled five times. The vehicle was totaled, but all the passengers managed to walk away from the crash. The most serious injury was to the driver, who suffered a fractured neck vertebra, thankfully without damage to the

spinal cord. The cause of the accident is still under investigation.

Accident No. 3. Four airmen were involved in another single-vehicle accident which is also under investigation. Two were belted in and walked away. The other two were thrown from the vehicle and died at the scene.

Accident No. 4. Three members of the Royal Air Force were driving on a desert track and swerved to avoid an oncoming vehicle. Once again, the vehicle rolled over. The two front-seat passengers wore their lap/shoulder belts. They suffered minor injuries and were treated and released from a local Kuwaiti hospital the following day. The backseat passenger suffered massive injuries. CPR was attempted at the accident site, but he was pronounced dead on arrival at the hospital.

The driver was very shook up over the death of his buddy. I leaned over and told him: “You had an accident, and your friend is dead. You feel responsible, but he almost certainly wasn’t wearing his seat belt. If he had been, his injuries would have been about the same as yours. Everyone needs to look out for himself, and your friend didn’t.” It wasn’t much consolation.

Several lessons are readily apparent from these four accidents: Traveling too fast on poorly maintained roads is dangerous. Sport utility vehicles are especially prone to rollover accidents. The most obvious lesson, however, bears repeating—*seat belts save lives*. I just hope some of the nonbelievers in the congregation get the message. Sincerely

Kenneth S. Brooks
1Lt, Physician Assistant
Camp Doha, Kuwait

We hope the message gets through to the choir because we

don’t want any empty chairs around the dinner table this Christmas. We keep on preaching, however, because the choir is always changing, and the message is so important. Motor vehicle accidents still represent the No. 1 killer of Air Force personnel.

Your letter pointed out some issues worthy of reinforcement. Sport utility vehicles—one of the most popular classes of vehicles today—are less stable in turns than normal passenger cars. The high ground clearance that enables an SUV to go off-road also raises the center of gravity and makes them more prone to rollover accidents. This isn’t a design fault, but a handling compromise SUV drivers should be aware of both on- and off-road.

You also mentioned poor road surfaces as a serious driving threat. Strange as it seems, many drivers apparently aren’t aware of the changes road surfaces can have on their vehicle’s handling and traction. For instance, on a washboard road (one with a lot of closely spaced ruts running across the surface), a vehicle’s tires can spend much of their time bouncing up into the air. When those tires are airborne, they are providing absolutely no traction at all. Combine a washboard surface with a turn and too much speed and a vehicle can instantly slide out of control.

Lastly, you pointed out how important it is for people to use their seat belts. Today’s vehicles are designed to protect passengers who remain safely restrained within the passenger compartment. The moment a person is thrown out of a vehicle, they lose all of that protection. During the past 2 years, I have seen both POV and GOV accident reports where this has happened to Air Force members. What a tragic, needless way to die. ■



GENERAL MICHAEL E. RYAN
Chief of Staff, USAF

In FY98, the Air Force experienced its safest year ever. We suffered only 24 Class A flight mishaps and 61 Class A ground mishaps—our best year on record. We equaled our fewest number of aviation mishap fatalities and set a record for our lowest number of on- and off-duty ground fatalities since becoming a separate service. We destroyed only 20 aircraft, equaling our best year ever. We achieved our lowest Class A ground mishap rate and our second lowest Class A flight mishap rate. We must remember, however, that these numbers represent much more. They represent people and resources that we cannot afford to lose.

We can attribute our safety record in FY98 to three key factors—leadership, accountability, and operational risk management (ORM). The people I meet and the aircraft and facilities I see on visits to our bases are clear testimony that our leadership is focused on both flying and working safely. We must continue to choose the right leaders who ensure that every person sets and maintains high standards, both in the air and on the ground.

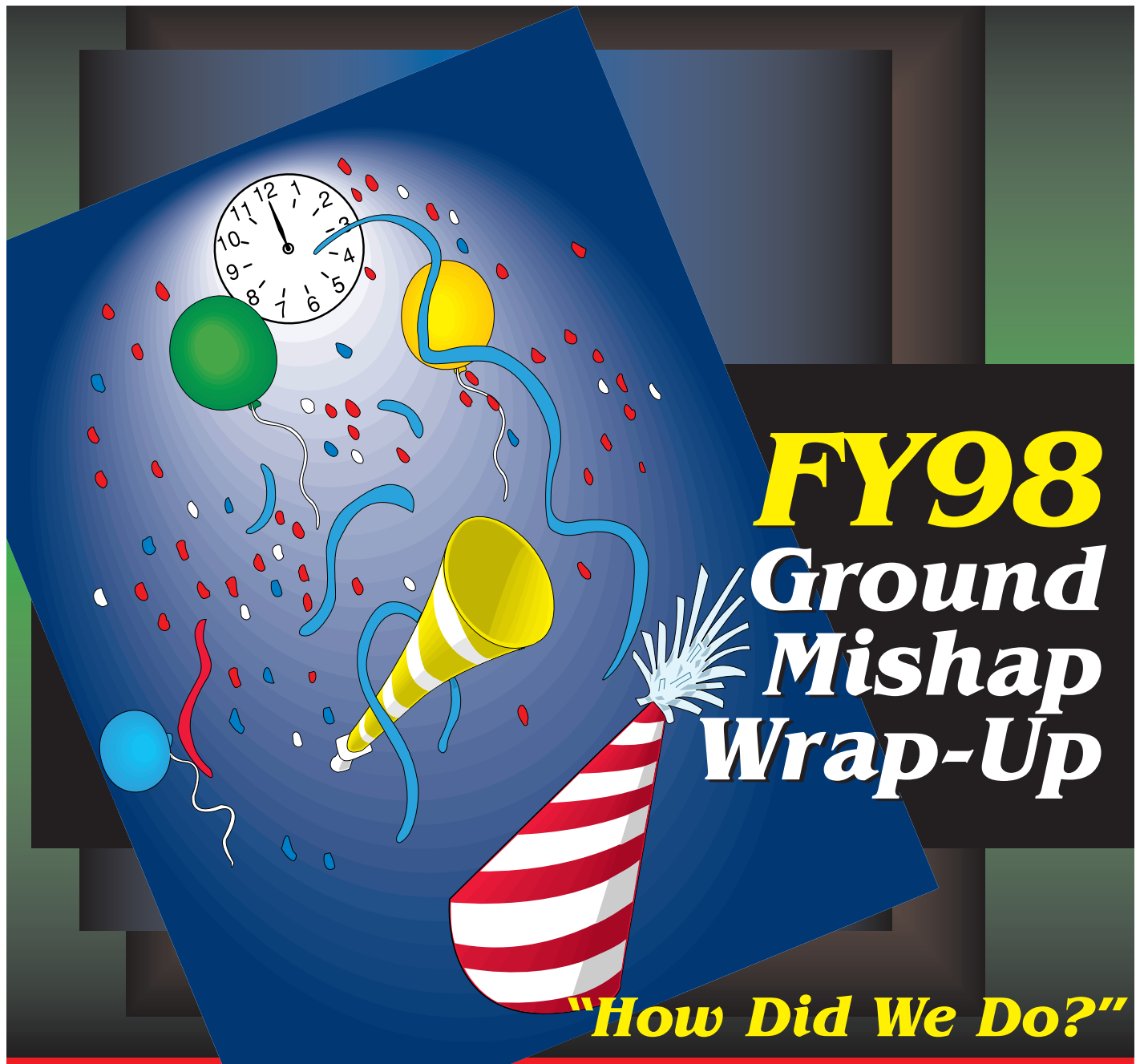
Additionally, our “operations related” mishaps were down in FY98 because of your efforts. Commanders, supervisors, and aviators are accepting responsibility for effective, safe operations. I believe the vast potential of our Air Force’s

AIR FORCE SAFETY— A RECORD YEAR

great future relies on every person accepting accountability for effective and safe operations.

Finally, we are beginning to reap the rewards of incorporating risk management into our daily tasks. Daily risk management increases every Air Force member’s situational awareness and provides valuable clues that enhance our ability to decide when to “knock it off.” It is not always an easy decision, but one that becomes clearer when grounded in sound risk assessment principles. For leaders, successful risk management begins with knowing your people, your equipment, and the pressures, including Ops and Pers Tempos that contribute to potentially dangerous situations. For individuals, it is knowing yourself, your challenges, your limitations, and the risks involved in our daily activities. Every Air Force team member has my total commitment and support should they make the decision to “knock it off.”

All members of the Air Force team have contributed to our tremendous safety record in FY98. However, we cannot relax. I challenge everyone to improve upon our safety record—in the air and on the ground—in FY99. Leadership, accountability, and risk assessment are key. Continue to stress these themes and keep them in your daily cross check. The results will save precious lives and critical national resources. ■



CMSGT SADIE STEWART
MSGT CHERYL CLAYTON
HQ AFSC/SEGO

Fiscal year 1998 was the best year for ground safety in Air Force history. We surpassed our previous overall best year, FY97, with a 21 percent reduction in total ground mishaps. Success stories like this one don't just happen—it took the hard work and dedication of each and every member of the Air Force. We can all be proud of our successes this year, but the sad news is we lost 52 members of our Air Force family in fatal mishaps. The following chart depicts the FY98 ground safety rates and the total number of Air Force military

and civilian fatalities and injuries experienced this year.

To completely understand how well we did in FY98, let's first analyze our losses in terms of fatalities, disabling injuries, and the "near misses" that could easily have resulted in serious injuries or death.

Over the past 20 years, an average of 70 percent of the Air Force people fatally injured each year died in privately owned vehicle (POV) mishaps. FY98 was no different; private motor vehicles claimed 34 of the 52 Air Force people who died in Class A mishaps this year.

The next few pages provide an analysis of three categories of ground mishaps. First, we'll discuss Class A mishaps—injuries that result in death or a permanent total disability (totally incapacitating injury) or property damage of \$1 million or more. Second, we'll discuss

FY98 On- and Off-Duty Military and Civilian Injuries

Type injury	On-Duty	Off-Duty
Fatal/permanently disabling injuries (Class A)	3	57
Partially disabling injuries (Class B)	3	3
Lost workday injuries (Class C)	1,074	1,170

Current as of 19 October 98

Class B mishaps—injuries that result in the loss or loss of use of any part of the body. The last category discussed in this article will be Class C mishaps—injuries resulting in a lost workday case involving 8 hours or more away from work.

Of this year's 63 Class A mishaps, one involved a DoD civilian employee, one involved contractor personnel, and 61 involved Air Force military members. Fifty-two of the 63 Class A mishaps were fatalities, 9 resulted in permanent disabling injuries, and 2 resulted in property damage. In the on-duty arena, three people were fatally injured (one civilian and two military members). Two of the three on-duty fatalities involved industrial operations, and the third was the result of a fire truck mishap. This number, though tragic, represents a 62 percent decrease over last year's on-duty fatal losses (three in FY98 compared to eight in FY97). As has been the trend in previous years, the majority of this year's fatalities occurred off duty.

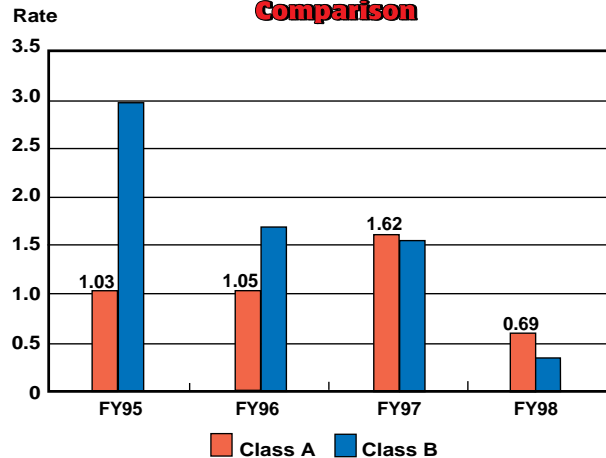
(Note: To help you better understand the charts shown throughout this article, the following is a brief description of how Air Force mishap rates are computed. Air Force mishap rates are based on the total number of injuries experienced per 100,000 people. Using a standard mathematical formula to calculate the rate allows us to overcome the continual fluctuation in the total number of Air Force personnel. Raw numbers alone do not provide an accurate mishap comparison when the force strength is continually changing. The following is the standard formula used to compute the rates shown in this article as well as the computation used to determine standard Air Force mishap rates.)

$$\text{Rate} = \frac{\# \text{ injuries} \times 100,000}{\text{Air Force population}}$$

In spite of these very real losses, we can all be pleased that our efforts resulted in a significant decline in on-duty Class A mishaps this year. Our success in the off-duty arena was not by as wide a margin, but we also accomplished a record low in Class A off-duty mishaps.

After reaching the previous record in FY96, Class A on-duty fatalities and Class B injuries continued a

On-Duty Ground Mishap Rate Comparison



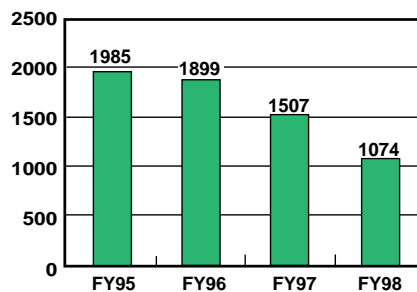
Current as of 19 October 98

downward spiral in FY98. Government motor vehicle (GMV) Class A mishaps in FY98 claimed only one Air Force member compared to six Air Force lives in FY97. An individual operating a fire truck was killed when pinned underneath his vehicle after it departed the roadway and rolled three-quarters of the way over. Government motor vehicle mishaps represent one of the greatest declines in FY98 ground mishaps. Class A industrial fatalities also declined—two in FY98 compared to eight in FY97.

This year, one individual suffocated as a result of inadvertently attaching an airline respirator to a 100 percent nitrogen supply instead of a breathing air source. The second death occurred when a pressurized split rim tire violently separated and struck the worker in the face as he attempted to disassemble it. Errors in judgment were factors in both mishaps. Inadequate risk assessment was also a factor in one of the mishaps, and deficient written guidance was a factor in the other.

We also experienced three on-duty Class B permanent partial disabling injuries in FY98, compared to nine in FY97. Judgment, complacency, and insufficient training were the major cause factors of this year's injuries.

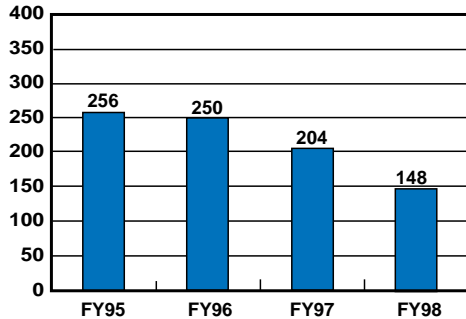
Class C On-Duty Ground Mishap Totals Information Current as of 19 Oct 98



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During the past 4 fiscal years, the total number of Air Force on-duty Class C injuries has steadily declined. To date in FY98, we have recorded 1,074 Class C injuries. Our final count for FY97 was 1,507 mishaps.

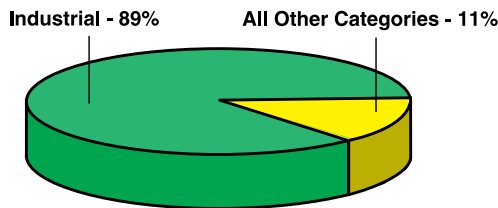
Class C On-Duty Ground Mishap Rates



Current as of 19 October 98

Although the rates have declined, the mishap causes have remained the same. Poor judgment was the leading cause of FY98 Class C on-duty mishaps with complacency in performing the task at hand running a strong second.

Class C Injuries By Categories



Current as of 19 October 98

We experienced a total of 1,074 Class C on-duty injuries in FY98, with 953 being industrial mishaps and the remaining 121 occurring in other areas. Vehicle mishaps, resulting in collisions with fixed objects, collisions with other moving vehicles, striking pedestrians or other workers were the predominate causes of lost workdays to Air Force personnel.

Back strains were prevalent this year just as in previous years. These strains occurred as people lifted, pushed, pulled, and moved objects to complete their tasks. Often during these tasks, injuries occurred to personnel when they misjudged the weight of an object, exceeded their physical capabilities, or lifted improperly.

Numerous injuries also resulted from slips, trips, and falls in the immediate work area and as people ascended or descended stairways. The majority of injuries occurred when people failed to use established procedures, used improper procedures, failed to use proper safety equipment, used poor judgment, failed to follow written guidance or verbal instructions, used improper

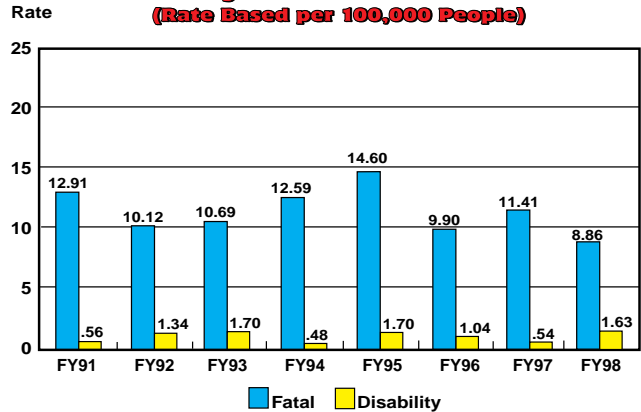
tools, or did not pay attention to what they were doing or where they were walking.

We are still killing and injuring ourselves just as we have for years. Supervisors and workers must understand and recognize when and where these common causes occur and work toward eliminating needless injuries and loss of life. Each individual must exercise personal accountability and responsibility for their own safety. We, as leaders and coworkers, must also take a personal interest in the safety and welfare of our fellow workers and friends.

Off-Duty Ground Mishaps—"Still Leading the Pack"

A closer look at the types of off-duty injuries and where they occur should pinpoint "where" and "what" we need to emphasize to prevent future loss of Air Force people to debilitating injuries. The remaining charts provide a comparison of injuries experienced over the past 8 years.

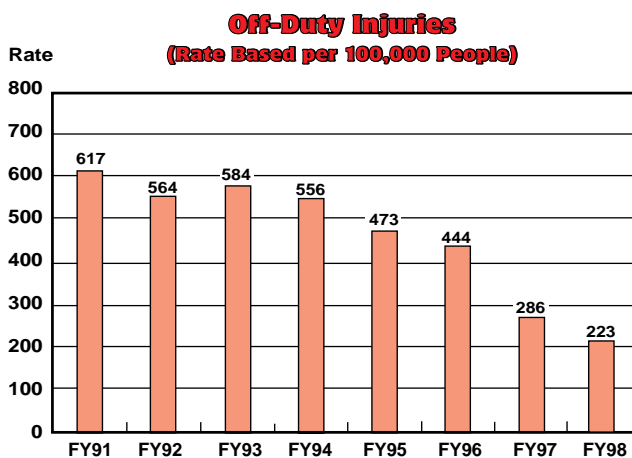
Off-Duty Fatalities & Disabilities (Rate Based per 100,000 People)



Current as of 22 October 98

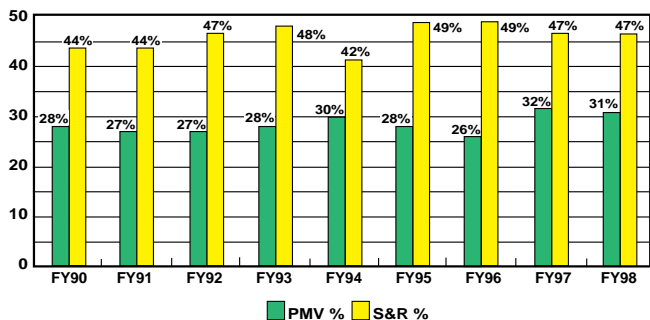
In FY98, we experienced 58 Class A off-duty mishaps compared to 63 in FY96, our previous record year. Forty-nine of this year's 58 Class A injuries resulted in fatalities, and the remaining 9 resulted in permanent disabling injuries. Thirty-four of the 49 fatalities involved POV mishaps. Fifteen of the 34 POV deaths involved motorcyclists, 1 involved a bicyclist, and the remaining 18 resulted from four-wheel vehicle mishaps. Twenty-eight percent of the four-wheel POV fatalities were not wearing seat belts. This year, motorcycle deaths increased more than 100 percent over FY97. Alcohol was a factor in over 25 percent of the two- and four-wheel mishaps.

We also experienced a marked increase in drowning fatalities—nine in FY98 compared to two in FY97. Although our overall off-duty numbers decreased, we must continue our efforts to further reduce vehicular and recreational mishaps. To reverse this trend, we must continue to stress safe cycling and recreational safety (especially proper use of flotation devices) along with the responsible use of alcohol, seat belt use, and defensive driving strategies.



As discussed earlier, PMV and sports and recreation injuries continued to lead the pack in off-duty fatalities and injuries in FY98. This year, the Air Force experienced a total of 584 sports and recreational injuries, 376 PMV mishaps, and 271 miscellaneous injuries. Off-duty activities still claim the most lives and result in a significant number of lost workdays. Off-duty injuries continue to be a "mission crippler." Errors in judgment, complacency, taking unnecessary risks, and lack of discipline continue to be the leading cause of deaths, disabling injuries, and lost workday cases.

Percentage of S&R and PMV Injuries to Total Off-Duty Injuries



Although mishaps involving alcohol use and failure to use seat belts have declined, we still have a long way to go to reach our goal of zero mishaps. We are certainly moving in the right direction, and this year's record mishap reductions are a direct indicator of our progress.

What can we do to become more safety conscious? What short-term changes can we make to ensure long-term safety awareness and attainment of our ultimate goal of eliminating mishaps? How do we instill a safety consciousness that is second nature both on and off the job?

We have made great strides in incorporating Operational Risk Management (ORM) principles into our on-duty activities, and the numbers bear this out. Achieving a record year with the many inherently hazardous missions we accomplished in FY98 was no accident. It not only took dedication and a total commitment at

every level of command, but also a concerted effort by each individual.

Our challenge now is to continue the integration of risk management into each and every task we accomplish, regardless of where it is completed. When it becomes automatic to consciously analyze even the simplest task and seek ways to manage the risks, we are well on our way to our goal of zero mishaps.

The next major step toward reaching our goal is to ensure we incorporate ORM principles into all of our on-duty operations as well as our Air Force culture. Once this culture change is ingrained into our professional culture, it will automatically start to spill over into our personal lives.

However, we can't rely on an automatic transformation. We must make a concerted effort to ensure full integration of ORM into our off-duty mindset and activities. A few of you may be reluctant to grasp this concept because you view it as just a fad or buzzword. ORM is not a new fad, buzzword, or even a new concept. It is one of the tools we've used for years to assess a situation, look at the various alternatives, and select the best option based on the information available.

Think about it. It's 4:30 p.m. and quitting time. What happens next? We run a preop checklist that includes questions such as "Is my car ready to go?" "What is the best route to take based on expected traffic conditions?" "Do I need to stop anywhere?" "What are some alternatives if I find unexpected conditions?" With the assistance of a few ORM tools and principles, we've made our decision, and it's now time to start our journey. We grab our hats and keys and undertake the task at hand—getting home intact.

The example above is a very abbreviated version of ORM, and many tasks will require the completion of a formal assessment. Making changes in the way we do things can be hard, but ORM is not new. It has been used in one form or another for years. It's just been dressed up, formalized, and given a name. Our future rests on our ability to succeed through a combination of risk assessment, proactive leadership, task performance both on and off duty according to standards, teamwork, effective communications, and the process of identifying hazards and implementing controls known as risk management.

Operational Risk Management is the key to fully integrating safety consciousness into every aspect of our lives, both on and off duty. Since we can't protect each other around the clock, it's imperative that we each possess the tools necessary to ensure our own safety and health. ORM provides the tools necessary to complete each and every task or activity with the full knowledge we have totally analyzed the potential risks, minimized or negated any potential hazards, and can safely perform the task without a potential for injury or death. These tools and principles are used to eliminate risks, show concern for fellow workers, and preserve Air Force resources and mission capabilities.

Again, congratulations on the safest year in Air Force history. Working together we *will* achieve zero mishaps. ■

Holiday Safety Planner

Courtesy "Safety Times"

*W*e take great measures to assure our holidays are pleasant and memorable. However, we need to make just as many preparations to assure they are safe.

The following are a few tips for the holidays that might have escaped your planning list.

Trees and Lights

- ★ Buy a fresh tree that smells like pine. Be sure its needles are hard to pull from the branches. Otherwise, it may be too dry and a fire risk.
- ★ Saw about 2 inches off the bottom of the trunk. Keep water in the stand.
- ★ Place your tree at least 5 feet from heat sources that can dry it out.
- ★ If a tree begins dropping its needles, put it outdoors at once.
- ★ Use no more than three standard sets of lights per outlet.
- ★ Never use decorative light strings marked "For Indoor Use" outdoors.
- ★ Unplug all electrical decorations when making adjustments or repairs and when leaving the house or going to bed.
- ★ Check old holiday light sets each year for cracks, frayed sections, or broken wires before hanging them.
- ★ If you can't get a string of lights safely repaired, replace it.

A Few Bright Ideas

- ★ Arrange candles in solid, stable holders.
- ★ Never display lighted candles in windows or near exits.
- ★ Do not burn papers in the fireplace. A flash fire may result as wrappings ignite suddenly and burn intensely.
- ★ Keep one or more fire extinguishers handy.
- ★ Decorate only with flame retardant or non-combustible materials.
- ★ Wear gloves while decorating with spun glass "angel hair" to avoid irritation to eyes and skin.
- ★ If you feel overwhelmed by the holiday activity, take a 15-minute walk. It will give you time to calm down and relieve tension. ■

