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

ROAD & REC

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SPECIAL ISSUE

I Am A Survivor!

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

ROAD & REC

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Front cover photo by Bob Van Elsberg

A MESSAGE FROM THE CHIEF OF SAFETY

MAJOR GENERAL FRANCIS C. GIDEON JR.

First, I would like to sincerely congratulate all of you for last year's 101 Critical Days Of Summer Campaign. The program proved highly successful and resulted in one of our best years for mishap reduction. Year after year we have focused on the increased hazards and risks associated with summer activities, and today we can proudly say that the program works.

Can we afford to sit back and rest on our laurels? Absolutely not! We have achieved these results because we have all made safety a part of our lives both on-and off-duty. Last year, we lost a total of 51 lives to ground mishaps, of which 18 occurring during the summer months. We need to keep safety in mind throughout the year, not just during the 101 Critical Days safety campaign.

If we look at some of the statistics for 1999, the Air Force experienced nearly 2,500 ground mishaps serious enough for people to be hospitalized or put on quarters for more than 24 hours. Our off-duty activities resulted in 1,400 people being hospitalized or put on quarters. The 101 Critical Days accounted for 26 percent of our off-duty and 22 percent of our on-duty injuries. The good news is that these numbers are at an all-time low. However, it is hard to express 2,500 injuries as a success. The real success is that we had 402 fewer mishaps in 1999 compared to 1998. Another way to evaluate our success is that if we were we to apply the 1990 injury rate to 1999, we would have had an additional 2,938 injuries. That's more than double what we actually experienced.

So, where do we need to target our efforts between Memorial Day and Labor Day? Traffic mishaps accounted for 87 percent of our off-duty fatalities and 31 percent of our total lost workdays during 1999. Sports and recreation accounted for the remaining 13 percent of our off-duty deaths, and 44 percent of the lost workdays. The bottom line is that we must keep ingraining safety concepts and practices into the things we do. We must reinforce the concept of risk management and safety awareness. These are the keys to our success.

Also, we only need to look at our own lives to realize that we make positive risk control decisions every day. For example, we make go/no-go decisions while operating our POVs and motorcycles. Many of us don't think of ourselves as gamblers, but the truth is we all gamble when we assume an unnecessary risk like speeding up when we see a yellow light. We are stacking the cards against ourselves when we don't understand the risks or choose to totally disregard them because we have the "it won't happen to me" syndrome.

Most of the time we cannot completely control the hazards because there are dangers and factors outside of our control. This is where the use of safety devices can reduce the chance of injury. For example, many fatalities have been prevented and injuries reduced because people used seat belts, air bags, life vests, helmets, infant car seats and other types of protective equipment. Remember, a little planning can go a long way toward preventing needless losses.

Folks, the things I cannot express enough are defensive driving, task preplanning, recreational safety, and risk assessment. We can't afford to lose a single one of you through carelessness or neglect. We have a duty to protect ourselves because in doing so we preserve our nation's combat capabilities.

Remember, set reasonable personal limits and take precautions to prevent or reduce the risks of the things you do. I don't want you just to "arrive alive," I want you and your loved ones to be injury free. So, go out and ***safely*** enjoy all 101 days this summer! ■

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Web page address for the Air Force Safety Center:
http://www-afsc.saia.af.mil

Commercial Prefix (505) 846-XXXX
E-Mail – vanelsbr @ kafb.saia.af.mil

DEPARTMENT OF THE AIR FORCE
CHIEF OF SAFETY, USAF

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CONTRIBUTIONS
Editor
Road & Rec
HQ AFSC/SEMM
9700 G Avenue S.E., Ste 285B
Kirtland AFB NM 87117-5670

"WE ALL SURVIVED!"

BY SrA ALLEN ROOF
AS TOLD TO BOB VAN ELSBERG
Managing Editor

Photos courtesy of SrA Allen Roof

Typically, we're happy if we survive an accident that could have taken our life. Often, however, we're not alone in the car. A wife or husband or one or more children may share that horrific moment when an accident catapults us into terror. For SrA Allen Roof, his wife Susan, and their 6-month-old daughter, Deanna, a trip meant to end with a Thanksgiving dinner instead ended up far different than they had planned. Today, some six months after their accident, they are thankful to be alive.

Thanksgiving 1999 was a special occasion for SrA Allen and Susan Roof. Both had grown up in South Carolina, and Allen's assignment at Shaw AFB meant they now lived close enough to visit both families during the holidays. Also, earlier that year they'd added little Deanna Nicole to their family and two sets of proud grandparents were looking forward to seeing her. After spending Thanksgiving with Susan's parents in Little River, the Roofs prepared the next morning for the 200-mile drive to visit Allen's parent's in Lancaster. They could not know what lay in store for them.

"We got up, ate breakfast, then got our stuff ready and loaded it up," Susan explained. "We put her (Deanna) in the backseat in her safety seat."

As they packed, Allen looked forward to the "second" Thanksgiving meal they were going to enjoy later that day.

"Mom cooks a pretty big Thanksgiving dinner every year," he said. "She cooks a turkey and a ham; makes potato salad, hambone and beans; and all kinds of desserts such as pecan pies, pumpkin pies, and sweet potato pies."

As Susan put Deanna's child safety seat in the backseat of their Ford Contour, she faced it forward. She would normally have faced it rearward, but she wanted to keep an eye on Deanna in case she began choking on anything during the drive. Making sure Deanna was firmly secured in her safety seat was something Susan had always taken seriously.

Coming toward them in the oncoming lane was a paraplegic driver in a Dodge Ram pickup. Just as they were about to pass each other something went very wrong ... "I saw the truck fishtailing in the other lane – then he came into our lane."

"I double the seat belt where it goes across and lock it down to where it is good and tight," she said. "That way the seat can't move. Then I put blankets around her to keep her comfortable."

Unlike many military families who, during a study in 1998, could not properly install their child safety seats, Susan had taken the time to read the instructions and practice. What she did not know, however, was that her determination to do it securely would, later that day, save Deanna's life.

Meanwhile, Allen loaded their car with a pair of bags holding the family's clothes and Deanna's portable crib. Although their car was small, Allen was able to get almost everything into the trunk. As they got ready to hit the road about 10:30 that morning, the weather began to worsen.

"When we started off it was cloudy and drizzling a bit – but nothing really hard," Allen said. "As we got going, it would rain hard, then it would drizzle a bit, then start raining hard again."

The weather wasn't too much of a concern to Allen because he was very familiar with the route he was driving. Like many two-lane country roads in South Carolina, Highway 76 was bordered by pine trees and farm fields and had a grassy shoulder wide enough for a driver to pull off the road if need be. And, although it was a holiday weekend, traffic was fairly light.

"It was a pretty easy drive," he said. "There were some cars out there, but it wasn't packed on the road."

They'd been driving for about an hour and a half and had covered about 60 miles. As they drove, Allen and Susan passed the time talking about the trip and listening to music on the radio. The rain continued to fall, most of it running off the side of the road. However, as they neared Florence, there was a problem. In the oncoming lane a four-inch-deep groove in the road surface had allowed water to collect. Coming toward them in that lane was a paraplegic driver in a black Dodge Ram pickup. Just as they were about to pass each other something went very wrong.

"I saw the truck fishtailing in the other lane – then he came into our lane," Allen said. "I had very little time to react. I tried to go off the right side of the road."

But there wasn't enough time. Although he tried to steer to the right and brake, he couldn't prevent the head-on collision. The impact was incredible.

"I remember hearing the impact and looking through the windshield and seeing part of his truck come over us," Allen said. "Then all I could see was black."

The collision had crushed the front of the Roof's car. In a bizarre twist of events, the pickup flipped over and landed upside-down on top of the Roof's car. As Allen regathered his wits, his first concern was for his family.

"The first thing I remember was looking over at Susan," he said. "I could tell the dash had hit her legs. She was screaming at the top of her lungs."

He also tried to turn around to check on Deanna. However, he was trapped in his seat by the wreckage and couldn't move.

"The steering wheel was pushed into my lap almost to my stomach," he said. "My left hand was resting on the wheel and my right hand was over where the shifter was. I remember looking at the radio and seeing it smashed to pieces from where my hand had hit it."

The impact had crushed the interior of his car around him, causing several painful injuries.

"The dash had also come back and down … I tried to move my legs once, but I felt too much pain in my knees so I didn't try to move anymore. My hands and arms ached and my knees were hurting from where the dash had cut into them," he explained.

The inside of the car was an incredible mess.

"Everything from the trunk had come through the backseat. The spare tire – which was bolted down (in the trunk) – was actually up there with us," Allen said.

Susan observed, "The backseat was slanted upward against the back of our seat. Deanna was on the bottom of all the debris that had come out of the trunk. The doctor said later that he didn't see how she could have survived the way her child safety seat was so ripped up."

Deanna's safety seat had been a cocoon of life for the infant. During the crash, it absorbed impacts which would have killed the infant.

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The force of the head-on collision crushed the front of the Roof's car, trapping Allen and Susan inside. Rescuers had to use the "Jaws of Life" to free them from the wreckage.

"The seat was pretty much busted into pieces," Allen said. "About the only thing holding it together was the cloth part where she was sitting."

Moments after the accident happened a passing motorist stopped to help the Roofs.

"A man ran up to my side of the car and looked inside," Allen said. "I told him about the baby … He said help was coming. The next thing I knew, rescue personnel were there. They took something and busted out the back window, then felt around and found Deanna and took her out."

Because of the mangled condition of their car, rescue personnel had to use the "Jaws Of Life" to free Allen and Susan from the wreckage. After about 15 minutes, they succeeded in getting Susan out the passenger side of the car. Trapped as he was by the dash, getting Allen out proved to be much more difficult.

"At first they had to use it (the Jaws of Life) to tear my door off – they pretty-much just ripped the metal apart," he said. "Once they got the door off, they tried to put the Jaws of Life beside my seat to move the dash up, but it (the Jaws Of Life) kept slipping and trying to go into the side of my leg."

However, the rescuers had to get the dash off of his legs to free him.

"They went ahead and covered me with a towel and busted the windshield out," he said. "Then they took a wrecker, hooked a chain to the dash and pulled it up until I told them it was off of my knees. Then they pulled me out."

After the rescue crew had freed the Roof's from their car, they were transported to Florence where Allen was admitted at one hospital and Susan and Deanna at another.

"They got me in there and the first thing I asked for was something for the pain," Allen explained. "They said, 'Hold on for a few minutes,' and then took me in for a CT scan. When they got done with that, they brought me back in and gave me something for the pain. Then I went out."

Two views of the Roof's Ford Contour after the accident. Hit by the larger, heavier Dodge Ram pickup truck at a combined speed approaching 100 mph, the Contour's front end was literally crushed by the impact.

Because of the trauma involved, Susan remembers very little about the actual accident or what happened at the hospital immediately after she arrived. Ultimately, doctors would find that she had broken both legs, her collarbone and her right wrist. In addition, she also bruised her tailbone, suffered a tear to her intestines and was bleeding internally. Susan's injuries were so severe that she had to be transported to a hospital in Charleston. There surgeons placed steel rods in both of her legs and operated to repair her internal injuries.

Allen's injuries included two broken wrists, a compound fracture of his left arm and a severed ligament in his left knee. Also, his right kneecap and right hand were crushed and he'd dislocated his left hip. He was immediately rushed into surgery.

"The first four days they pretty much kept me asleep – they didn't let me wake up or open my eyes or anything," he said. "I remember waking up four days later in intensive care. Then a couple of days later they went in and did surgery on the back of my right hand to put a metal plate in it."

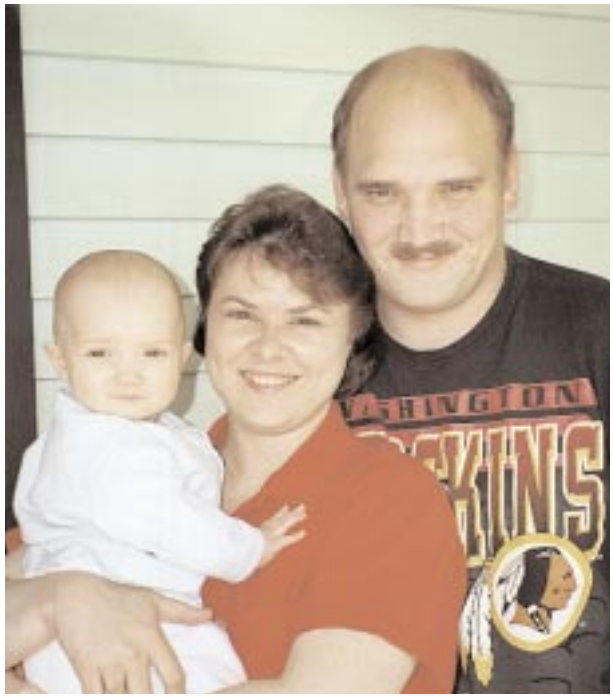
The real miracle was Deanna. Protected by her child safety seat, all she suffered was "a little scratch in her left cheek," Susan explained.

It was December 14 before Allen, Susan and Deanna were all reunited again. They had finally made it to Allen's parent's home – not to celebrate Thanksgiving, but to begin a lengthy recuperation from their injuries. Three and a half months after the accident, Allen has been told it is still too early to know how well his injuries will heal. But he ***is*** alive, as are Susan and Deanna – all survivors of one of the most violent of car crashes – a head-on collision. In Allen and Susan's minds, their survival was the result of making a choice every motorist should make before starting a trip.

"Wearing our seat belts – really, the seat belts and airbags together – kept us from going through the windshield," Allen said.

Susan added, "Our seat belts and child safety seat played a big role in saving our lives. I think everyone should wear seat belts." ■

Editor's Note: Infants weighing less than 20 pounds and under 1 year of age should be placed in a rearward-facing child safety seat.



Deanna Nicole, Susan and Allen Roof are living proof that child safety seats, seat belts, and air bags can make even horrible crashes survivable.

I AM A SURVIVOR – "NEARLY DEAD RIGHT"

Motorcyclist SrA Luke Singletary at the intersection where a driver violated the right-of-way, turned in front of him and caused the accident.

BY SRA LUKE SINGLETARY
AS TOLD TO BOB VAN ELSBERG
Managing Editor

Photos by Bob Van Elsberg

The intersection of U.S. Route 90 and County Road 285 comes to a "T" about 15 miles east of Crestview, Fla., and just north of Interstate 10. There, Route 90 stretches east and west, running straight and flat all the way to the horizon with a shoulder bordered by pine trees. At the "T" intersection, visibility is, as pilots like to say, "unlimited" – virtually nothing to keep a motorist from seeing approaching traffic. Still, the intersection has a reputation for being "dangerous" – often because someone has violated the right-of-way. When that violation brings a motorcycle and an automobile together, it doesn't matter who was at fault. For the motorcyclist, the results are painful and predictable, as SrA Luke Singletary found out last November.

November 9, 1999, was a pleasant day along the Florida Gulf Coast. The blue skies, gentle breeze and warm temperatures belied the fact that fall had come. In a place where there seemed to be endless amounts of sun, beach and ocean, it was another beautiful day. SrA Luke Singletary, assigned to the 8th Special Operations Squadron, was thinking about buying his own little piece of "paradise" about 40 miles northeast of Hurlburt Field.

"I went to look at some property up in Mossy Head. It was a nice day, so I said to myself, 'All right, I'll ride the bike.'"

The ride from Hurlburt Field up to the property took him through the coastal community of Fort Walton Beach, then north on State Route 85 past Eglin AFB and Duke Field to I-10. Traffic was light, so it was a relaxing drive, one he was enjoying as he got the feel of his newly purchased 1999 Suzuki TL 1000 motorcycle.

"It took me about 45 minutes to get there, then I spent about half an hour looking at the property. After that I walked into the (real estate) office and talked to some people and then got back on my bike."

The Suzuki needed to be warmed up before taking off, so Luke set the engine on fast idle while he donned his Kevlar-reinforced nylon ballistic jacket, helmet and gloves. By the time he had his gear on, the Suzuki was ready to go.

"The realty place had just a regular sand parking lot, so when I pulled out I had to go really easy. As I rode down the highway, the 'low fuel' light started flashing, so I thought, 'I'll hit the gas station up the road, then go back down to Hurlburt."

It was about two miles to the gas station, located at the

intersection of U.S. Route 90 and County Road 285. Luke rolled on the throttle and accelerated to 55 mph. As flat as the road was, he could have almost coasted to the gas station. And he practically had the road to himself.

"There wasn't anything going down that road … I had let one car go by before I pulled out on the road – that was all of the traffic going east. I passed, maybe, two cars going west.

As he neared the gas station, things were about to change.

"As I came to the intersection of 90 and 285, I saw a red Plymouth Neon coming toward me in the westbound lanes. The driver just whipped into the turn lane, so I rolled off the gas and slowed to 45 mph."

The car driver paused briefly, then turned left to go through the intersection (like the car above) and pulled directly into Singletary's path.

At that point, Luke needed to go just past the intersection in order to turn into the gas station. As fast as the car was approaching, Luke expected the driver to turn left and blow through the intersection. However, Luke decided to follow the Motorcycle Safety Foundation Course (MSF) training he'd just received and "covered his brakes" in case the driver did something unpredictable.

She did.

"As I got right up on the intersection I saw the front of the car begin to move. That's when I hit my brakes."

Things happened so quickly he didn't have a chance to avoid the accident. "Turning wasn't an option. If I'd turned right, she'd have probably run over me."

Grabbing the front brake lever and jamming the rear brake pedal down with his foot, he locked up the rear brake, leaving a 28-foot-long skid mark. But there was no way he could stop in time.

"I remember seeing the plastic fairing on the front of the bike begin to distort and the forks starting to come in. I flipped over the car and landed on my back, then I came up sitting up. When I opened my eyes I was sliding down the road on my backside with my legs straight out in front of me and thinking, 'How am I going to get out of this?' I slid like that for a bit, then my boots grabbed the road and caused me to flip. When I stopped flipping and opened my eyes, I was lying on the double yellow line, just past the start of the other driver's turn lane."

Luke's injuries were both serious and painful.

"As I was lying there, I figured my neck and back were OK because I hurt so much. I was lying on my left side with my left leg down on the ground and my right leg up and bent. I was going to roll enough to put my back and head on the ground so that I could relax and not have anything move."

As he tried to roll onto his back, he discovered something was wrong with his left leg.

"From about five inches above my knee my left leg didn't do anything, so I knew my femur was broken. At the time I didn't know my right leg was also broken. I just knew that my right knee really hurt."

Luke's right hand was also injured. As he'd slid down the road, a piece of glass had torn through the palm of his glove and cut his hand deeply. After the accident, the driver sat in her car, never getting out to help Luke. Fortunately, some Good Samaritans came along.

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After Singletary's accident, wreckage from his motorcycle was left in a pile next to the road.

"There was a registered nurse who was there when the accident happened. Also, there was an Air Force reservist who stopped and helped me. They basically stayed there and talked to me. The reservist took my hand and held pressure on it to try and stop the bleeding because it was bleeding pretty badly. My glove was full of blood – it was dripping out of the fingers."

Others came along and also helped.

"There was a bunch of other people who stopped, and then another woman used her cell phone to call 911. Some of the people parked their cars in the road to keep oncoming traffic from running me over."

It took about 30 to 35 minutes for an ambulance to arrive.

"They put me in the ambulance and took me down I-10 to Crestview to the North Okaloosa Medical Center. There they took me into the emergency room, took all of the X-rays and got my helmet off. One of the nurses was going to use iodine to clean out my hand. When she started, glass came out of the wound, so she just flushed it with iodine and left it alone. I was at Crestview for about six hours. I finally got to Eglin about midnight."

When he arrived at the Eglin AFB hospital his treatment began in earnest.

"They wheeled me into a room and one of the guys asked, 'Are you ready for some good drugs?' I said, 'Oh yes,' because I hadn't had anything up to that time. The next time I woke up it was 3 a.m. I kind-of sat up in bed and looked down at my left leg. I saw that I had a steel bar below my knee going through my leg to keep traction on it. While I was at Crestview they'd put a traction splint on my leg, but it hadn't held enough traction, so my leg had been contracting."

He had surgery to place a metal bar in his left leg to brace his femur. He spent 11 days in the hospital then, because of the severity of his injuries, was placed on convalescent leave until Jan. 3.

The driver who caused the accident was charged with making an improper left-hand turn – basically failing to yield right-of-way at the intersection. And, although Luke couldn't have prevented the driver from causing the accident, he did all that he could do to protect himself before he began riding. His full-face helmet, Kevlar-reinforced ballistic nylon jacket, full-length pants and high top boots did help. "I didn't have any bruises, scratches, or road rash," he explained.

His MSF training also helped.

"I was the using the 'SIPDE' (Scan, Identify, Predict, Decide, Execute) principles – basically looking ahead and seeing what is going to happen, attempting to predict what the other person is going to do, then making a decision (and acting on it)."

Although the driver didn't do what Luke had expected, he'd seen the potential danger and had slowed down as best as possible. While this didn't prevent the crash, it did lessen the severity of the injuries.

Having survived his own close call, Luke offered the following advice to other Air Force motorcyclists.

"Even though a long sleeve shirt is all that the Air Force requires, I would wear a jacket. Pick one that's comfortable enough that you'll wear it. Don't just pick one that looks good, because if you can't stand to wear it, you won't – especially down here where it's (often) 100 degrees."

Experience has taught Luke that sturdy gloves are also a good idea.

"I would get gloves that, if not thick, are at least reinforced in the palms. Many sport bike gloves have carbon fiber palms and protection over the knuckles and backs of the fingers. Sure, softer gloves may be more comfortable and you may feel the controls better, but your hands – when you come off the bike – are going to be one of the things that hits the road."

Living in Florida, Luke has seen plenty of riders cruising down the road wearing T-shirts, cut-offs, tennis shoes, and no helmet. Such riders, he believes, are their own worst enemies – future victims of a highway Darwinism where those who ignore safety are removed by what Singletary calls, "natural selection." ■

I AM A SURVIVOR –

"OUT OF CONTROL!"

BY SSGT JAMES PARKER
AS TOLD TO BOB VAN ELSBERG
Managing Editor

Many sport utility vehicles are purchased because they give an impression of ruggedness. Also, their ability to go off-road is appealing to the adventurous. However, there can be a downside. Because of their higher center of gravity, SUVs have been more prone to rolling over than automobiles – especially in single vehicle accidents. In such crashes, the ability of the SUV's seat belts and airbags to keep occupants properly restrained in their seats and inside these vehicles can be especially important in preventing injuries and saving lives. On Halloween night, 1999, SSgt James Parker, his wife, Catherine, and daughter, Angelica, found out just how important their seat belts and airbags were. It was a Halloween scare they'll never forget.

October 31 was a drizzly day in Little Rock, Ark. Still, it was Halloween, and a little wet weather wasn't going to deter one young trick-or-treater who was anxious to fill her bag with candy and other goodies.

"We were hanging around the house and helping my daughter put on her Halloween costume and looking forward to going out trick-or-treating," James said.

He'd noticed the inclement weather. However, just as his daughter wasn't to be dissuaded from trick-or-treating, James and his wife also had plans that would take them out that night despite the wet weather.

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"My wife and I have a part-time job downtown and we had to do that at some point that night. So we waited until after my daughter had finished trick-or-treating in the drizzle and rain, then decided to go to the job and get it done before it got too late."

Although the Parkers lived at Little Rock AFB, located just north of Little Rock in Jacksonville, their part-time job was on the south side of Little Rock, nearly 30 miles away. There they did janitorial cleaning at the Winmere warehouse. Typically, they drove south on Highway 67/167 from Jacksonville into Little Rock, then traveled east on I-40 and then turned south onto the Highway 440 bypass headed toward the airport. Grooved concrete on Highway 440 – the newest major roadway in the Little Rock area – helped drain off the water coming down from the showers that day.

The Parkers – James, Catherine and Angelica – all piled into their red 1998 Ford Explorer around 6:30 that evening. The 30-minute drive to the job was uneventful. After putting in a little more than an hour at their job, they set the alarm, closed up the warehouse, then drove out the gate and locked it behind them. By then, it was dark – just after 8:10 in the evening. They should be home before 9 p.m.

"We pulled out of the parking lot from Winmere, took a right, then headed down Lindsey Road and went about three-quarters of a mile. There wasn't any traffic on the road then. We came up to a corner where there was a Total gas station on the left-hand side, turned left, went maybe 75 yards, then turned right."

The right-hand turn placed them on the onramp for Highway 440 west. The onramp sloped up and curved gently to the left to enter the right-hand lane of the highway. Although it had stopped raining, the roadway was damp. However, bad weather was nothing that would bother James. The Explorer had always proven surefooted, regardless of road conditions.

"I've driven in just about anything you can imagine, from a dry sunny day, to ice and snow, to rain and downpours. I never had so much as a quirk from the vehicle – not even the slightest indication that it might be going out of control. It always ran a true line – steady – and I never had any problems with it … So I proceeded up the onramp. About half-way up the onramp, I looked over my shoulder to the left and didn't see any vehicles coming. I was accelerating at this time – getting up to the 65 mph speed limit for the interstate."

But he never made it to 65 mph, nor did he make it onto the interstate. The Explorer had accelerated to 50 mph and was just at the point where the onramp blended with the highway. Just then something went very wrong.

"The vehicle jerked violently to the right. I don't recall hearing a loud bang from a tire blowout, but the next day when I saw the vehicle the right front tire was flat. I don't recall hearing any abnormal noises and I didn't see anything in the road up to that point. The front of the vehicle just violently turned to the right."

Sliding sideways at 50 mph on the onramp, James tried to steer to the left to straighten out, but the vehicle wouldn't respond.

Parker's vehicle left the road at this spot.

"Perhaps it was already too late when I tried to turn. Everything happened so quickly – yet I can remember parts of what happened in slow motion. As the vehicle turned sideways, I saw the headlights shining on the tops of the trees that were down the embankment and on the fence line down there. I saw those and knew that there was a dropoff.

"I remember seeing my wife out of the corner of my eye. I think she either grabbed my arm or the arm rest – tensing up because she knew we were about to go over the embankment. I remember looking at the trees and saying 'Oh no!'"

As the vehicle slid sideways, it hit the shoulder then began to go down the embankment. Things now rapidly began to get worse.

"The left driver's side tires must have dug into the gravel and the grass, causing the vehicle to start to roll onto its left side.

"As the vehicle was rolling over, my head was thrown to the left. At about 45 degrees into the roll, my head slammed into the driver's door window, breaking it and causing most of my injuries."

According to the mishap report, the Explorer rolled over twice before landing on it's wheels, then rolling backwards and smashing into a fence and a tree. The severe sideways blow James had suffered to his head left him disoriented.

"I never really lost consciousness – but I lost comprehension during the rolling process … I remember hitting my head on the window and knowing the vehicle was still moving in a violent manner. I also remember being thrown about – but I had no idea about what direction we were facing."

After the vehicle stopped, James sat stunned in the driver's seat. The Explorer now faced up the embankment, the vehicle's headlights shining upward into the empty sky.

"I was still inside of the vehicle, held in by the seat belt. The driver's door was bent and mangled and hanging open. My wife and daughter were screaming and crying. I'm sure they were also disoriented as to what

SSgt James Parker's vehicle finally came to rest after it struck this fence and tree.

had just happened. I was more calm, basically trying to regather my wits and wondering 'Where am I – what just happened?' I remember turning the headlights off. People have asked me since, 'Why did you do that, somebody might have seen you?' As far down the embankment as I was, nobody would have seen the lights down there."

Old habits kicked in.

"I tried to turn the ignition off. You usually take your key with you when you leave a vehicle, but the key wouldn't come out. The airbags had deployed – I knew that because when I went to try to turn the key off my hand hit the bag. It didn't really phase me as to what it was at the time. In fact, when I was asked by the insurance company the next day, I told them I wasn't sure if the airbags went off or not. I wasn't positive until I looked at the vehicle later."

In fact, what he'd experienced was the new modified airbag many auto makers began installing in 1998.

"The vehicle had the second generation de-powered airbags. Most people that I've heard of being hit by the (earlier) airbags said that they hurt – they leave something like a powder residue burn on their face or upper body. I had no evidence of that. I never felt the airbag go off, so I guess it did it's job better than the earlier ones could have. It protected me from hitting anything and I didn't even know it had deployed."

The vehicle impact had crushed the front passenger door against a tree, making it impossible to open. Catherine, who'd been in the front passenger seat, and Angelica, who'd been in the middle of the backseat, were both relatively unharmed. Both had been held securely in their seats by their seat belts as the vehicle rolled. Catherine knew she had to get her family out of the wrecked vehicle. That meant moving James, who was still stunned, out of the driver's seat.

"She reached over – I think she was telling me to 'get out' – and undid my seat belt, then pushed me out of the vehicle. Then she and and my daughter got out and started climbing up the embankment toward the side of the road to signal for help. I was still sitting in the grass next to the vehicle. When she reached the top, she turned around and called for me to come up there. I looked at her, stood up and began climbing up the embankment. While I was climbing I reached into my pocket and pulled out a cell phone to call 911. I got the 911 operator on the phone by the time I reached the top of the embankment. He asked me to state the nature of my emergency. I remember telling him, 'I don't know' – I was that fazed."

continued on next page

The damage suffered by the Ford Explorer clearly indicated that it had rolled side-over-side as it went down the embankment.

The 911 operator kept talking to him.

"He asked me, 'What happened?' At that point I looked down at my shirt and saw a considerable amount of blood. I turned around and looked down at the vehicle and saw it at the bottom of the embankment. Then I said, 'I've been in an accident.'"

The 911 operator needed to get James' location in order to dispatch emergency personnel. Like many accident victims, James was temporarily confused.

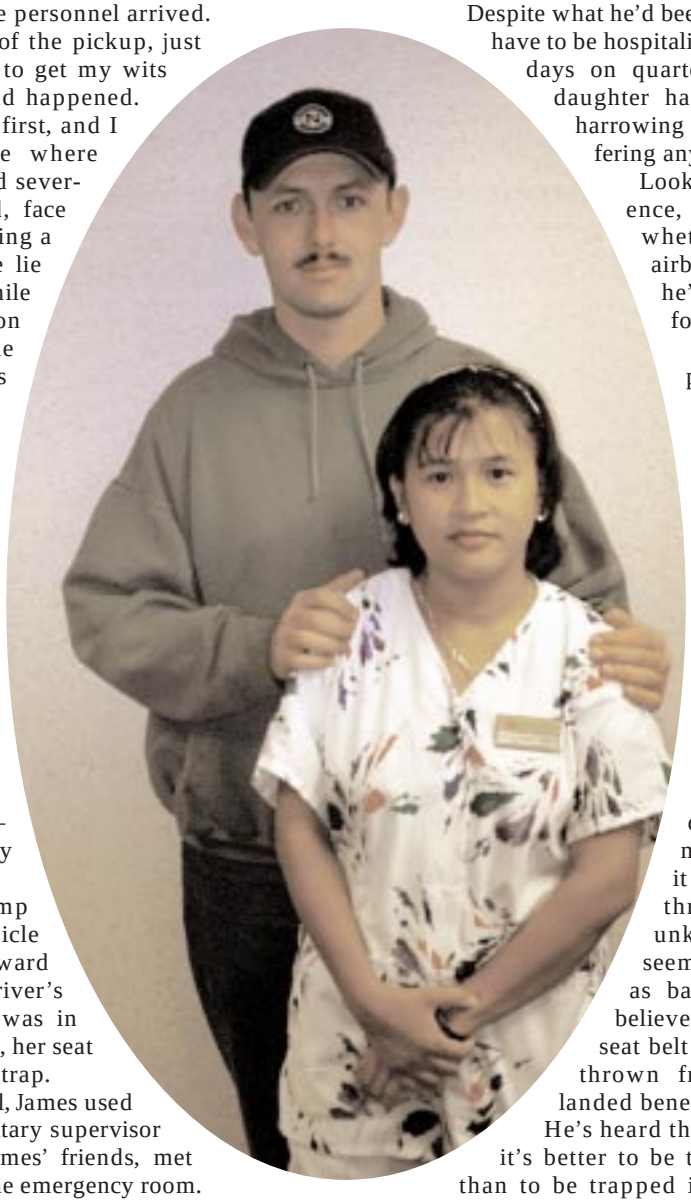
"The 911 operator asked me where I was. Although I'd just left my part-time job – a route I drove five times a week and was very familiar with – I couldn't tell him. I knew I was in Arkansas and that I was standing next to a

Photos by Bob Van Elsberg and provided by author

highway. Then he asked me, 'What's around you?' I said, 'There's a Kenworth truck dealership right across the street. Since there is only one in Little Rock, he knew where I was. That way he was able to lead the state troopers and paramedics to me."

Armed with that information, the rescue personnel made it to the accident scene within 10 minutes. Before they arrived, a helpful motorist pulled over, allowing Catherine and Angelica to sit in the warm cab of his pickup truck until the rescue personnel arrived.

"I stood in the doorway of the pickup, just looking around and trying to get my wits about me as far as what had happened. The ambulance showed up first, and I remember climbing inside where they had me lie down. I had several lacerations on my head, face and ear which were producing a lot of blood. They had me lie down on the stretcher while my wife and daughter sat on a bench in the back of the ambulance. My wife was complaining that her leg hurt, so they put a splint on it. She also had a cut on the top of her right hand, which they bandaged. My daughter had no complaints other than her sandal. She had a pair of sandals on and one of them was still in the Explorer. She also had a little red spot on her forehead which she didn't complain about. She was shaking – she had been disturbed by the trauma of the accident – but she wasn't physically injured in any way."



James believes the bump occurred when the vehicle rolled and Angelica bent forward and hit her head on the driver's armrest. Because Angelica was in the middle backseat position, her seat belt didn't have a shoulder strap.

As they rode to the hospital, James used his cell phone to call his military supervisor who, along with two of James' friends, met them when they arrived at the emergency room.

"They had bandaged my head pretty well while I was in the ambulance, so we went directly into the emergency room. The nurses started to look at my wife and my daughter. Seeing as I was walking and seemed to be doing pretty good, I think they decided to leave me as I was until the doctor could get there to remove the bandages and see what was underneath."

When the doctors got to him, they began treating his cuts.

"They pulled three pieces of glass out of my head – one was almost an inch long and about a half-inch tall. Then they pulled out a few other smaller pieces of glass that had gotten embedded into my head through the course of the rolling, sliding and tumbling. Finally, they stapled shut the two largest lacerations on my head and released me."

Despite what he'd been through, James didn't have to be hospitalized and only spent four days on quarters. His wife and his daughter had come through their harrowing experience without suffering any serious injuries.

Looking back on his experience, if you ask James whether seat belts and airbags make a difference, he'll give you a straightforward answer.

"For all three of us – particularly myself and my daughter – I think the seat belts undoubtedly kept us inside the vehicle. If my daughter hadn't been belted in and had still stayed inside the vehicle, she would have been thrown about. That probably would have been life-threatening.

"My wife, had she not had a seat belt on, would have almost definitely been injured more seriously. Whether it would have been life-threatening or not is unknown – her side didn't seem to be damaged nearly as bad as mine. I honestly believe that if I hadn't had my seat belt on, I would have been thrown from the vehicle and landed beneath it and been killed."

He's heard that some people believe it's better to be thrown from a vehicle than to be trapped inside during an accident. But he wouldn't agree.

"That's one of the most foolish things a person could think. Look at the design of vehicles and the structural integrity put into them as a result of crash tests. It's better to be inside the vehicle and stay seated than to be outside of the vehicle when it's coming at you." ■

"HE DIDN'T SEE ME!"
I AM A SURVIVOR –

BY SRA CHRISTOPHER WHITWORTH
AS TOLD TO BOB VAN ELSBERG
Managing Editor

There are two truisms that play into many vehicle accidents: most serious accidents happen within five miles of home, and most are at relatively low speeds. However, where motorcycles and cars are concerned, you can add a third – most drivers say they "never saw" the motorcycle before the accident. When 22-year-old SrA Christopher Whitworth climbed onto his Suzuki GS 1100 motorcycle on a Saturday morning last November, he couldn't know all three of these truisms would come into play in a way that would change his life dramatically.

It was a weekend and SrA Christopher Whitworth, assigned to Sheppard AFB, Texas, for retraining to become an electrician, was doing a bit of automotive electrical work at his off-base apartment.

"I was working on my new Ford Explorer, which I had just bought, and needed to step out to Radio Shack to get some wire," he explained.

Rather than taking the Explorer, Chris chose to ride his motorcycle. After all, the Explorer was cluttered with parts and it was a nice day – perfect in fact for the short mile or so ride to Radio Shack. He always enjoyed chatting with his friends there, so he donned his helmet and brightly colored vest, then rode to the store, covering the distance uneventfully.

Using his motorcycle to run chores like this was nothing new to Chris. Riding his motorcycle left his car free for his wife to use. Also, since taking his Motorcycle Foundation Course training in September of 1996 at Spangdahlem AB, Germany, he'd never had an accident. He'd understood and accepted the wisdom of being prepared for the worst and never rode – not even on short trips like this one – without his helmet.

After he finished his business at

Deep scratches on Whitworth's helmet show where it struck the road.

Radio Shack, Chris slipped on his helmet and brightly colored vest. Starting the engine on his motorcycle, he figured he'd be home in a couple of minutes and back to working on the radio in his Explorer.

"I got on the motorcycle, pulled out of the parking lot and got onto Seymour Highway headed toward home."

But he didn't get far. Chris had barely pulled into the left hand east-bound lane of the highway when an elderly one-legged driver prepared to exit a Post Office parking about 200 yards up the road on the right. As Chris accelerated to 40 mph, he saw the vehicle ahead and anticipated that the driver would look left for approaching traffic before pulling onto the roadway. With his motorcycle's headlight glowing and his brightly colored vest – Chris felt he should have been easy to see. He saw the driver look to the right, obviously checking the traffic across the road in the west-bound lanes before pulling across the highway and turning left. However, the driver never looked back to the left. What he did instead came as a complete surprise.

"He pulled out in front of me at the last second! I didn't have time to put on the brakes. I didn't have time to do anything – it was just that quick. The last thing I remember was seeing him looking in the opposite direction."

Unable to stop or turn in time to miss the car, Chris slammed into the car's left front quarter panel. The impact was horrendous.

"The motorcycle stopped instantly and fell over. However, I got to do some 'gymnastics' as I was thrown over his vehicle. It was quick and violent."

The resulting impact with the road ***was*** violent. Flying over the car and landing on the highway, Chris was knocked unconscious by a severe blow to his helmet. As he tumbled head over heels, his helmet took repeated impacts which battered it badly – but it did its job. His one piece of good luck was that he didn't slide into the oncoming lanes where a car might have run over him. Chris later regained consciousness at the hospital.

"I woke up at the hospital getting a CAT scan. I had no idea how long it had been since the accident. The first thing I actually recollect was a police officer. He came up and asked me if I had any relatives in the area."

The front of Whitworth's full face helmet protected his face during the crash.

Chris was still numb from the accident.

"I really wasn't in much pain. More than anything else, I just wanted to get up. The backboard I was lying on ***was*** hard – that was the biggest pain I had there."

While he was in the hospital, he thought about his accident.

"I was just happy to be alive. I knew I'd been in an accident, but I didn't know how I'd acquired all of my injuries. Also, at that time I didn't know how badly I'd been hurt."

The fact was, he was lucky to be alive.

"The ambulance crew thought I was dead when they arrived. I was lying unconscious in the road in a puddle of blood."

Although he'd survived the accident, he spent 44 days recovering from his injuries. His protective gear – especially his helmet – had saved his life. However, he'd still been badly injured.

"I had a skull fracture on the rear right side of my head and I had a fractured disc in my neck. I had a broken rib, and my left wrist and the little toe on my right foot were broken. Something was 'thrown out' in my right shoulder, and I couldn't extend my right arm all the way up or out in front of me."

The impact did more than fracture his skull. He also suffered what his doctors call "conductive hearing loss" – caused when the impact dislocated the three bones in his right inner ear. Although he is recovering from his other injuries, his ear will require surgery if he is to hear clearly again. Still, he is alive, due in no small part to the protection provided by his full-face helmet.

"If I hadn't been wearing my helmet I would definitely be dead. My helmet took the initial impact. When I was thrown off my bike at 40 mph I was basically a windmill. I didn't know how I was going to land. You never know in that kind of thing."

The accident was Chris' first – and will probably be his last – on a motorcycle. Nearly losing his life to someone else's mistake has given him second thoughts on whether he will ride again. Yet, the fact is that he ***is*** alive today – a survivor of a head injury that would have probably been fatal without a helmet. Knowing that has left him with a distinct impression about the value of helmets.

"I am proof that a helmet WILL save your life in an accident … Texas doesn't have a helmet law, so you can ride around without one … I know it has crossed my mind several times how nice it would be to ride down the road with the wind in my face. But it's short trips – like mine to Radio Shack that should have taken five minutes to get there and back – when the unexpected happens. Accidents come at the worst times." ■

Photos by Bob Van Elsberg

Whiskey River Take My M

LT COL JAY NEUBAUER
HQ AFSC/SEFL

The dorm manager found him pretty much the way his friends had left him the night before. He was sprawled out on the bed, clothes still on – only now he was cold to the touch, pasty-white, and not breathing. Death had come sometime in the wee hours of the morning, making the night a permanent event. The poor guy probably never woke up from his alcohol-induced stupor. What a way to go.

The young airman was relatively new to the base and the Air Force – just getting to know some folks and having a good time hanging with new friends. The party had been a spur-of-the-moment thing among a bunch of the dormmates, something to do on a Saturday night. Some booze, some munchies, some tunes and they had the makings of a great party, right?

The game started simply enough with shots of whiskey, but as usual with a little too much booze onboard, the game progressed to a dare for someone to down a fifth in one shot. Being somewhat uninhibited after a few shots of whiskey and possessing the need to be accepted as well, the young airman took the challenge.

Truth be told, he was a relative novice at drinking and made it only three-quarters of the way through the bottle before his stomach couldn't take it anymore and he had to stop. Unfortunately, the damage had already been done. Ten minutes later he could no longer stand on his own. Forty-five minutes later he was out cold.

His "buds" did the "honorable thing", half-dragging and half-carrying the young airman back to his room to sleep it off. They joked about the incredible hangover he was going to have the next morning, never realizing that consuming that amount of alcohol would kill him.

Fortunately, this tragic event is a story, made up to illustrate a point. The bad news is that something similar to this has occurred at least four times during the past year to Air Force active-duty personnel. Again, what a way to go!

Alcohol, or more precisely, ***ethanol***, has been the stuff of legends, seen as both a blessing and a curse since the beginning of recorded history. It has made for great parties (the Greeks and Romans both had a god of wine) and has threatened the downfall of entire civilizations. It certainly has some dramatic effects on the human body, some nice – others not so nice, some rapid – others more long term.

So what is alcohol and how does it effect the body? What is it that makes someone happy after one drink and stupid after five? How could alcohol kill a young healthy man after a binge or turn a woman into a frail, sickly shell of a person? Alcohol is a drug and like many drugs, it is addictive!

What is Ethanol?

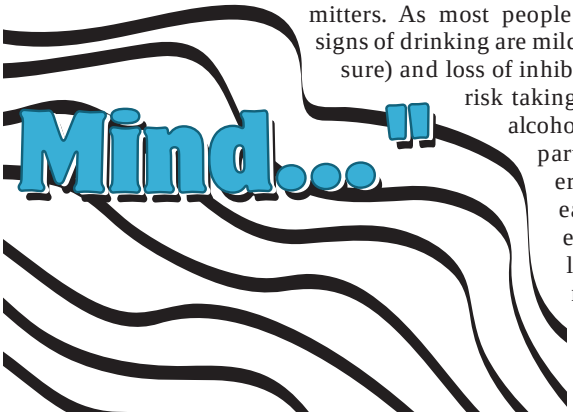
Referred to as "short carbon fragments" by well-known aliens like the "Coneheads," alcohol is just that – two carbon atoms stuck together as a result of fermenting just about anything, such as barley, rice, potatoes, etc. Because of its size and chemical properties, ethanol is rapidly absorbed by the stomach and small intestine and can be detected in the bloodstream in as few as ***five*** minutes. Most folks over the age of 18 know that food seems to slow the effects. In other words, if you eat something before the party, the first few drinks won't hit you as hard. In fact, fatty foods such as potato chips and french fries do slow down the absorption of alcohol, as also does milk. Water, on the other hand, actually speeds up the process.

Once alcohol is consumed, the body rapidly starts to rid itself of the alcohol through a metabolic process in the liver. About 90 percent of the alcohol is converted to carbon dioxide and water in the liver, while the other 10 percent is removed unchanged in the breath. That's the reason one can smell a friend's breath and tell if he or she has been drinking and why the police can figure out how much you've had by using a breathalyzer.

What's important – and the reason for discussing metabolism at all – is that alcohol is removed from the body at a pretty constant rate. That rate doesn't change – ***not*** with cold showers, ***not*** with strong coffee, ***not*** as a result of running around the block, and certainly ***not*** with forced vomiting. In fact, for a light drinker, the body will remove about one ounce of 90 proof alcohol or one 12 ounce can of beer per hour. Simple math suggests that alcohol will build up in the bloodstream unless each drink is "nursed" over an hour or two.

What Are the Effects of Ethanol?

Once absorbed, alcohol is evenly distributed through the body – the most important place being the ***brain.*** Most of the effects of alcohol, both good and bad, can be explained by its action on chemicals in the brain called neurotransmitters. As most people know, the first signs of drinking are mild euphoria (pleasure) and loss of inhibitions (increased risk taking), which is why alcohol is popular at parties. The partyers feel more at ease, making it easier to talk and less difficult to meet others. Add another drink or two, and that turns into a loss of coordination and judgment. This occurs at a blood alcohol level of around .08, thus, the reason for the legal blood alcohol content (BAC) driving limit. More alcohol onboard leads to staggering, falling down, confusion, sleepiness and, with still more, unconsciousness and death. Death is usually do to respiratory depression (the drive to breathe is blocked in the brain).



Why Can Some People Drink More?

Because alcohol is distributed evenly in the body, size is a big factor in determining what makes it into the bloodstream (blood alcohol level) and ends up in the brain. A bigger, heavier person has more body area in which to distribute alcohol so, for the same amount of alcohol, less makes it into the bloodstream and from there into the brain. In addition, some people are able to withstand the effects of alcohol better than others due to genetic differences in brain chemistry (not a significant reason). Third, those who drink regularly develop a ***tolerance***, meaning the body has adapted and requires more alcohol to produce the same effect.

So What's The Big Deal?

Since, in reality, very few people die from acute alcohol poisoning – what's the big deal? Truth is, alcohol does a much better job of killing indirectly. For instance, it's the social drinker who tries to drive home after a few drinks at a party, the swimmer who goes out in the surf after too many drinks at a beach party, or the boater who drives his boat through the dock after a day of drinking out on the lake, who most often ends up as a fatality statistic. And, unfortunately, more than half of all fatal motor vehicle accidents in the United States involve alcohol. Granted, people in the Air Force do a better job of protecting themselves than the general public, but we still lose several people every year from alcohol-related accidents.

So You Want Me To Give Up Drinking?

Not a bad idea since alcohol doesn't provide any necessary benefits to health. On the other hand, an occasional drink doesn't hurt either (there is good evidence that a glass or two of red wine each day reduces the risk of heart disease). The important thing is to be smart about it. Plan ahead – don't wait until the effects of alcohol have clouded your judgment. Things to think about include setting a limit on your drinking or, if limits aren't your thing, establishing a plan for what happens after the party. For example, designate a sober driver to get you home or plan to stay over at your host's house or at some place within easy walking distance (and remember, drunk pedestrians ALSO have accidents!) Watch out for your friends, your husband or wife and help them when it has become obvious they've had a few drinks. And, for heaven's sake, don't let someone drive, swim or boat after more than a drink or two. Remember, just a drink or two starts to cloud judgment and effect coordination (Danger – Will Robinson!)

Remember:

- Plan ahead
- Set a personal limit
- Designate a driver
- Watch for trouble
- Help others

The Fast Lane to the Information You Need!

BOB VAN ELSBERG
Managing Editor

The first time I logged onto the Internet I felt like Dorothy in the Land of Oz. A fascinating world of information lay before me that I could use for my job. I didn't have to put up with a cranky old wizard or the Wicked Witch of the West. I didn't even need ruby red slippers – it was just "point and click."

However, it wasn't all gravy. Trusting my search engine to chug me along the yellow brick road to the Emerald City – the place where I could get all my answers – had its problems. Sometimes I didn't know where to look – which "turn" to take on the road. And worse, extraneous "links" – the flying monkeys of the Internet – kept trying to carry me off to somewhere I didn't want to go. I needed help.

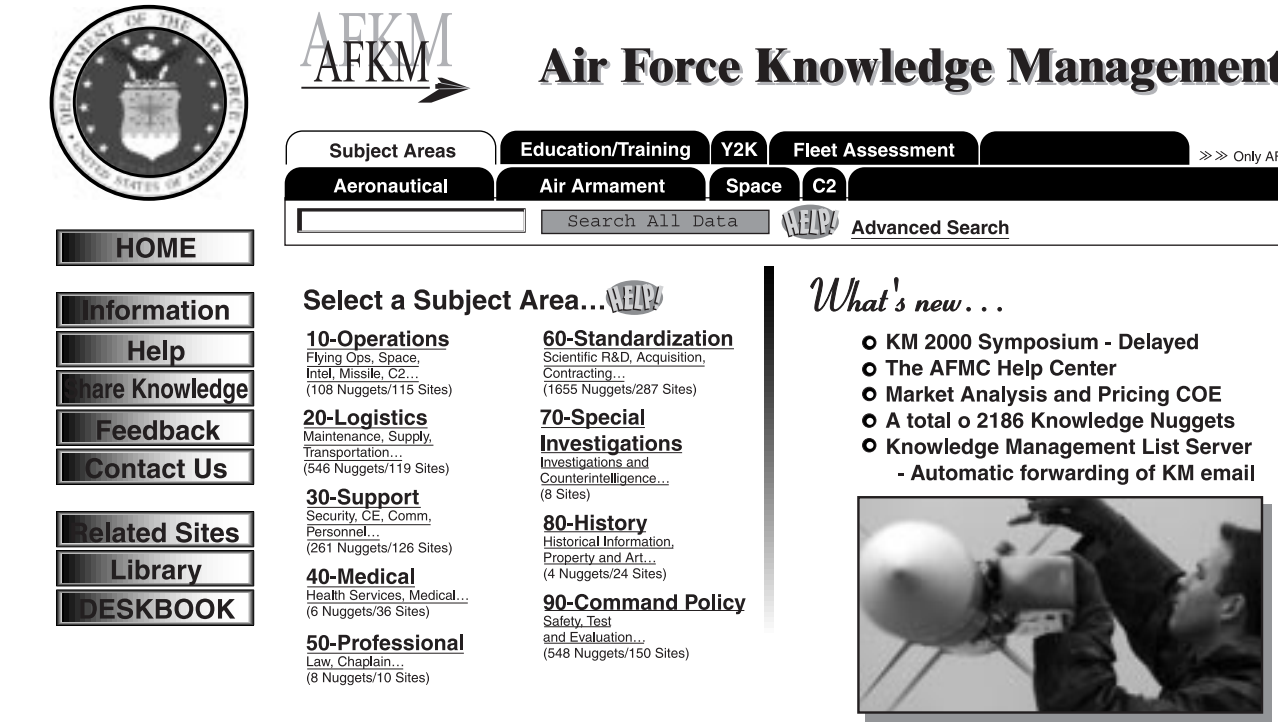
Well, help has come, thanks to the Air Force Materiel Command. Their Air Force Knowledge Management (AFKM) system is a World Wide Web-based program designed to help people get and share important information. No more chugging up and down the Internet wasting valuable time, now it's a simple matter of going to **www.afkm.wpafb.af.mil**. There I can be sure of finding plenty of "nuggets" – chunks of good information I can use. Things like "Lessons Learned" and "Best Practices" from throughout the Air Force that can keep people from "reinventing the wheel" or running down the same blind alley where someone else has already blundered. Suddenly, at my fingertips was the kind of information I and other Air Force people need to work more efficiently. But it didn't happen by chance. Some folks at AFMC got together and made it their goal to see that valuable information didn't just gather dust.

Randy Adkins, AFKM program manager, explained, "Removing barriers to knowledge flow through the use of technology can increase information sharing, collaboration on new ideas, and empower our workforce to put these (shared) ideas into action."

This sharing of information is more than just a convenience, according to Robert E. Mulcahy, AFMC deputy director of requirements. He explained AFKM reflects the concerns of the Air Force Inspection Agency and General Accounting Office that lessons learned not become "lessons lost." Because of that, he worked to broaden the initial AKFM program to encourage information sharing. He believed it was vital to do so.

"The need for knowledge management (KM) was evident – especially from those cases where we may have paid a tremendous price in lost lives or critical assets because we lacked information," he said. He explained the problem was "we have lacked a system to share knowledge beyond the pocket in which it was created." All too often, he observed, valuable information simply never got beyond the cubicle of the individual who created or possessed it.

AFKM now has provided a system for sharing that information, and it's been put together in a way that will look comfortably



familiar to anyone who has ever used a search engine. For example, major subject areas are boldly displayed on the left side of the screen. These "portals," as they are called, are just like the special interest categories used by search engines such as ***Yahoo***, ***Lycos***, and ***Excite***. With AFKM, however, these subject areas are organized according to the Air Force Index 2, Index for Standard and Recurring Publications. So, instead of the "News," "Business," and "Education" – categories you might see in a popular search engine – AFKM's portals list topics such as "Operations," "Logistics" and "Support."

So much for the talk, let's find out how the system works.

For example, under "Select a Subject Area" is the category titled "90-Command Policy." Listed beneath that category are "Safety," and "Test and Evaluation" … with a note indicating there are 548 Nuggets and 150 sites.

Deciding to look up "Safety," you click on the portal titled "90-Command Policy." You next find yourself looking at a page offering three subjects, one being "Safety." You click on "Safety" and on the next screen you're given eight different safety topics to choose from ranging from "Nuclear Weapons and Systems Surety" to "AFOSH Standards." You click on "Ground Safety" where you're told you'll find 49 nuggets and 11 web sites. As the screen comes up, each nugget's title is highlighted in blue and accompanied by a brief lessons-learned synopsis. Clicking on a nugget gives you the full details of the problem and a recommended action. Finally, as you scroll to the bottom of the page you see a list of related web sites.

Not a bad way for people in the Air Force to share information with each other! And it gets better. Maybe YOU'RE the person with the "hot tip" others need to hear about. Check out that button marked "Share Knowledge" on the left hand of the AFKM web page. Clicking on that will allow you to submit your own "Lesson Learned," "Best Practice," or suggest a web site you believe provides helpful information. Imagine that; a web page with a search engine that not only gives you information, but also lets you talk back and help others. In an information world all too often populated with flying monkeys, that's user friendly! ■

Note: *Information for this article provided by Greg Bernitt, Air Force Knowledge Management Team.*

KEEP YOURSELF PROPERLY HYDRATED

MAJ (DR) ERIC CHUMBLEY
59th Medical Wing
Lackland AFB, Texas

Photos by SSgt Steve Thurow

Editor's Note: I was grateful that my BDUs were warm enough to keep out the morning chill as I hiked into the woods. However, it was early in the season and the squirrels just weren't moving. Although I didn't want to give up, by 10:30 the heat and humidity had become oppressive. I needed a drink of water, but I'd expected to be done hunting before it got hot and had left my canteen in the car. Feeling my strength draining, I headed back to my car – barely making it. Underestimating how important it was to keep myself properly hydrated, I'd nearly turned myself into a statistic. However, you don't have to be so foolish. This article will provide some useful tips to help you stay properly hydrated as you head into the hot summer months.

Air Force members are called upon to operate in a variety of strenuous conditions and many have to cope with intense heat on a daily basis. A variety of medical conditions may plague these folks, including exertional heat illnesses and overhydration. Understanding these problems and how to prevent them requires a knowledge of the body's way of regulating heat and what is a proper water and sodium balance.

You're An Evaporative Cooler

During heavy exercise, a person's body can generate 10 to 20 times the amount of heat that it does at rest. Since only 20 percent of that heat is used to do work, the rest must be dissipated. That extra heat is transferred from the core of the body (mainly the muscles) to the skin, where it can be released to the environment. Because that heat transfer is accomplished by increasing blood flow to the skin, it is vital to keep up the blood volume, which means drinking enough water to stay properly hydrated. In addition, the evaporation of sweat – which is composed mainly of water with a small amount of sodium – is the body's major mechanism for dissipating heat. Therefore, when people become dehydrated their bodies are less able to deal with heat stress and they are at greater risk for a heat-related illness. In fact, a fluid loss of one percent of a person's total body weight can increase the body's core temperature.

Common exertional heat illnesses include include heat syncope, heat cramps, heat exhaustion, and heat stroke. Heat cramps, heat exhaustion and heat stroke – which are the most dangerous – are caused when the body loses too much water, and sometimes, sodium.

Heat Syncope

Heat syncope usually refers to the fainting that occurs at the end of some event (such as a difficult march or race) because of an improper cool-down. It may also occur when people stand for a long period of time in a hot environment without moving their legs. Heat syncope is not dangerous and it's easily treated and prevented. Treatment is simple; have the person lie down, elevate their legs, cool off in the shade, and drink cold fluids. People can prevent heat syncope by staying well hydrated and continuing to walk after they've exerted themselves. Also, getting acclimated to the heat is important to preventing heat syncope.

Heat Cramps

Heat cramps typically occur during or after intense exercise and most often effect the legs. Sodium is lost through the process of sweating and is further diluted in the blood if (only) plain water is used to replace fluid loss. Treating heat cramps normally involves having the victim rest, then cooling them down and massaging the effected muscles. Prevention involves having people acclimate themselves to the heat, keep themselves properly hydrated, and eat a diet that provides enough salt for their system. The most

important thing to note about heat cramps is that they may signal the onset of an even more serious heat illness.

Heat Exhaustion

Heat exhaustion is more complex and more dangerous than heat cramps. The victim continues to sweat, becomes weak and light-headed and may become somewhat confused. Their temperature may range from slightly elevated to as high as 103 degrees. Generally, the problem is that they haven't replaced the sodium and water they've lost through sweating. To treat victims, have them rest, cool-down, and drink cold fluids. Because heat exhaustion is serious, get victims to a medical facility where their sodium levels can be measured and they can be rehydrated at the proper rate. Again, prevention involves becoming acclimated to the heat and keeping properly hydrated.

Heat Stroke

Heat stroke is where the body's cooling mechanisms are overwhelmed. It's typically caused when people don't drink enough fluids and haven't gotten acclimated to the heat. Victims may appear to be moderately confused, or they may go into a coma and have a high fever. Contrary to popular conception, victims almost always continue sweating. Because heat stroke can rapidly lead to the collapse of vital body functions, victims need immediate treatment at a medical facility. Their treatment may be more complex than with other forms of heat illness based upon the victim's temperature and sodium balance, but almost always involves rapid cooling. Heat stroke is prevented the same way as the other heat illnesses.

You Can Drink TOO Much Water

The flip side of dehydration is overhydration – or simply, drinking too much water too quickly. When sodium is lost through sweating and water is drunk as the replacement fluid over a period of hours, the sodium left in the blood can become diluted. This can cause a condition called "hyponatremia", which can lead to damage in certain kinds of tissues in the body. Changes are most noticeable in the nervous system where seizures, coma and even death can occur.

Recognizing overhydration or hyponatremia is challenging because the symptoms may resemble those of heat stroke or heat exhaustion. Early symptoms can include confusion, nausea, fatigue, muscle cramps and weakness. More serious symptoms include vomiting, muscle twitching, delirium, seizures and coma. The main difference between heat stroke and heat exhaustion, when compared to overhydration, is that overhydration doesn't cause the victim's temperature to rise. Because overhydration can be deadly, the final diagnosis must be made at a medical facility where the victim can be properly treated.

Take Proper Care of Yourself!

If all of this talk about hydration and sodium balance sounds intimidating, relax. During Warrior Week, every Air Force basic trainee is taught to drink one canteen (one quart) of water per hour when working in the heat. As it turns out, that guideline stacks up pretty well with

the recommended hydration procedure – plus or minus a quarter of a canteen. You can drink a bit less if you're not exerting yourself as hard or if the heat stress, as measured by the wet bulb globe thermometer and reported by flag conditions, is light. The American College of Sports Medicine also recommends drinking about half a quart two hours prior to exercising. They also advise drinking no more than a quart and a half per hour or 12 quarts during a 24-hour period.

Remember, hydration is an on-going process. Waiting until you've already begun exerting yourself to begin proper hydration is like jumping out of an airplane and saying, "Well, I really ought to put on a parachute." Sorry – it's too late.

To keep your sodium level up, eat a balanced diet and avoid skipping meals during periods of intense activity. The salt taken in replaces the sodium lost in sweat and aids the body in absorbing water, making rehydration ***after*** exercise more effective.

What is the best thing to drink? While water is usually the right fluid for hydration, sports drinks containing sodium and carbohydrates should be used whenever you're doing heavy work for an hour or longer in hot conditions. You should also use these drinks if you haven't eaten or don't plan to eat for four to six hours. Because sports drinks may taste better than plain water, they are more likely to be drunk in sufficient amounts.

The Bottom Line

While exertional heat illnesses and overhydration are preventable, they are a threat for anyone who must work in hot conditions. To protect yourself, follow these simple guidelines:

- Drink enough water throughout the day to require you to empty your bladder four times.
- Drink a full quart each hour – plus or minus a half-pint – during heavy work or exercise in hot conditions.
- Never drink more than a quart and a half per hour.
- Never drink more than 12 quarts per day.
- Don't skip meals if you can help it.
- Drink a sports drink whenever doing strenuous work in the heat for longer than an hour or if you are unable to eat a meal at a regular time.
- Don't wait until you're working in the heat to begin properly hydrating yourself – get a two-hour head start. ■

Kids On The Move Programs

Photo by Bob Van Elsberg

COL MICHAEL COLLINS
AFSC/SEG

I recently attended a conference sponsored by the Department of Transportation (DOT) in Washington, D.C. One of the items we discussed was safety programs for our military kids. DOT was sincerely impressed and complimentary regarding our overall traffic safety programs in the Air Force. Overall, we are doing a good job of educating our airmen about good safety practices, but what about our kids?

The truth is, there is more that we can do for our kids. We can go one step further by having volunteers within the Air Force – and not just the base safety offices – develop fun and interesting safety educational programs for our kids whether they live on or off base. Our main concern should be training our kids to use good safety practices daily and to avoid putting themselves in harm's way.

One way to do this is to start a base-wide "Kids On The Move" program. For example, your organization could team up with the base safety office and security police to put on a "Bicycle Rodeo." Some bases have already established bicycle rodeos or similar programs. While the target group includes all kids who ride bicycles, reaching the younger kids is a concern because the sooner they are exposed, the sooner they will begin to understand and appreciate the rules of the road. Topics covered should include things such as learning to understand road signs, how to properly signal for turns, which side of the road to ride on, how to avoid hazards, and how to be aware of what is going on around them. In addition, bicycle rodeos offer a good opportunity to teach kids on and off base the local bicycle riding rules while also registering their bicycles (if required by the security police) and having them checked for safety. Not only will this make kids safer today, it will pay big dividends in the future when they start driving the family car.

Bicycling isn't the only activity suitable for a "Kids On The Move" program, you should also consider rollerblading and skateboarding. I would recommend designating a safe place for kids to enjoy these activities ***away*** from vehicle traffic areas. How often have you seen kids who were rollerblading or skateboarding dart out in front of a moving vehicle? I have seen several instances where a kid came out of a driveway and into the street without ever looking. Fortunately none of them were injured, but we should train them to be safer.

So what can ***we*** do?

We – and that's all of us in the Air Force – can volunteer to make these programs a reality. And don't be afraid to be innovative – any idea or program that saves a kid's life is a good one. It might take a little creative effort to partner-up with a local law enforcement agency, fire station, base safety office or an off-base organization, but I guarantee it's worth the time and effort.

How do I know? My 7-year-old son, Justin, has gone to bicycle rodeos for the past two years and been taught good riding techniques and the local laws and regulations. When we recently moved to Albuquerque, he asked me when he would get the chance to attend another bicycle rodeo. I was surprised and very happy that the training had made him aware of the fact that he needed to know the riding rules and safety considerations for the new area we'd moved to.

Also, a "Kids On The Move" program doesn't have to be limited to younger kids Justin's age, it can target any age group or activity to promote safety. Some other possibilities to consider include teenagers age 16-18 who are just learning to drive, swimming safety, hiking, or any other activity you feel the need to address. You can also teach kids what to do in emergency situations and how to get help in unpopulated areas.

It's important to remember that many kids consider themselves bulletproof – they're not afraid of anything. Therefore, I challenge all of you to build community programs to educate our children and help keep them safe. You'll be surprised at how much ***you'll*** learn by participating. Lead by example and our kids will follow.

If you come up with a good program you'd like to share with the rest of the Air Force, please send it to us here at the Safety Center. We'll post it on the Center's ground safety web site. Remember, the time and effort you dedicate to a program like this could save one of your own kids or the child of someone you know. So, don't just ***think*** about it, do it! ■

Recreational Vehicles Need Tire Care Too!

TIRE INDUSTRY SAFETY COUNCIL
Washington D.C.

Owners of recreational vehicles should pay close attention to their vehicle weight, load distribution, and tire inflation pressures before heading off on their next road trip, according to the Tire Industry Safety Council.

"RV owners who take the time to check their tires for proper inflation and loading can avoid the aggravation and expense of a possible breakdown on the road," said Council Chairman Donald B. Shea. He added that proper tire care is especially important because most RVs are out of service for long periods and then frequently used at near-maximum loads, particularly during the hot summer months.

"RV owners should check their tires at least once a month and **always** before starting any extended trip," Shea said. Inflation pressures should be checked when tires are cold, as heat generated during driving temporarily increases air pressure above the recommended cold inflation pressure. This is normal, so owners should never "bleed" air from a hot tire, as this could result in dangerous underinflation.

Since many gas station air gauges can be inaccurate due to exposure or abuse, Shea advises RV enthusiasts to carry their own tire inflation gauges calibrated to 120 psi.

Once you are sure that your tires are properly inflated, the next important thing is to be sure not to overload your vehicle. "Vehicle overloading is a leading cause of RV tire failure," Shea noted.

Your RV tire has maximum inflation and load capacity information molded into its sidewall. All RVs built since 1972 also have a certification label which contains the following information:

- Gross Axle Weight Ratings (GAWR) for each axle on your vehicle.
- Tire size.
- Recommended cold inflation pressure.

You can also find your tire's load limitation in the vehicle owner's manual or by consulting your local professional tire dealer.

Even if your tires are the recommended size and load range for your vehicle, the only way you can be sure they are not overloaded is to weigh, axle by axle and side to side, your fully loaded vehicle on reliable platform scales. Such weighing devices are available at many highway weighing stations or building supply stores. The Council also offers these additional RV tire care and safety tips:

- Loads should be distributed evenly inside your RV to improve stability and handling and to avoid overloading one side of your vehicle.
- Stones or other foreign matter stuck between tire grooves should be removed and tires with less than 1/16th of an inch of tread should be replaced.
- Smaller tires on towed vehicles turn more revolutions per mile than those on the towing vehicle, so watch for overheating and make sure you maintain the proper tire inflation pressure.
- A proper spare tire and tire changing equipment should always be carried with your RV.
- Don't overinflate your tires in an attempt to compensate for a heavy load.

The Council offers a free brochure on recreational vehicle tire care. To order the guide, send a self-addressed and stamped business envelope to **Tire Industry Safety Council, P.O. Box 3147, Medina, Ohio 44258.** ■

Riptides, Currents a

VIRGINIA RAE MACK
Editor
Ashore Magazine

Lome, on the island of Togo, is a high-surf beach where huge masses of water in breaking waves can hold a person under water for long periods of time, tumbling them against the rocky bottom or reefs, or hurling them against a sandy seafloor. Because the water is so rough, locals are terrified of swimming there. Not so the tourists. A few years ago one reported that his buddy was missing in the surf. When rescue workers started looking for the victim, they found 13 bodies.

Understanding The Hazard

Beaches are built and maintained by the surf. High-surf beaches, such as the Wedge at Newport Beach, Calif., and the North Shore in Hawaii, are only for experienced surfers and body surfers. These beaches, in addition to the one at Lome, have earned reputations as killer beaches.

While shark attacks get the most publicity, rip currents (also known as rip tides or undertows) are the primary beach hazard. According to the International Lifesaving Federation, at least 100 times more people die each year from rip currents than from shark attacks. The United States Lifesaving Association estimates that 80 percent of surf rescues are because of rip currents. These are fast, seaward-moving currents caused by waves pushing water up the slope of a beach above the mean sea level until a mass of water builds up. When the first lull in the wave sets, gravity pulls the water seaward through a trough in the sand or along a jetty, creating the rip current.

How Big Is the Threat?

Drowning is the fourth leading cause of accidental death in the United States, following automobile crashes, poisoning and falls. And it's a death that shouldn't happen, according to Bob Gabrial, director of Life Guard Beach Service, one of two lifeguard services responsible for the beaches on North Carolina's Outer Banks.

During 10 days in August 1998, Gabrial's service rescued 716 people. While only seven of those rescues were considered near-drownings, the rest involved swimmers in enough trouble to need help getting back to shore.

During that month, a low-pressure system with northeast winds hovered off the coast of the Carolinas, creating rip currents that tore at sandbars and repeatedly sucked swimmers away from the shore. However, because the system brought little rain, tourists flocked to the beaches.

"People just didn't pay attention to the red flags we had put up warning of rough conditions," said Gabrial. "This was a freak of nature. It was unlike anything we had ever had here."

Gabrial went on to say that when people rent a beach cottage for a week, they want their money's worth. They don't like sitting on the beaches just watching the surf, they want to jump in and get wet. And that's when the trouble begins.

For instance, during that August a group of five young people got caught in a rip current while swimming just offshore. Three were able to make their way safely to the shore. One ran 250 yards to get a lifeguard. They then started searching for the two missing swimmers. Their bodies surfaced two hours later.

Another problem lifeguards face, according to Gabrial, is people removing the red flags. During

and Waves, Oh My!

1998 a person was prosecuted for doing just that. "We wanted to make an example out of him," Gabrial said. "After he took those flags, two families went into the water because they thought the swimming conditions were OK. If anyone had died, we would have prosecuted him for their deaths, too."

North Carolina beaches aren't the only ones with dangerous rip currents. San Francisco's Ocean Beach has been deemed by ocean safety experts as the most perilous city beach in the United States because of its killer rip currents.

One quiet Saturday during August of 1998, a particularly potent rip current cut a deceptively calm gray swath in the rolling surf at Ocean Beach. For three waders there was nothing in the appearance of the water that would have signalled a threat. According to Chris Brewster, president of the Americas Region of the International Life Saving Federation, "There are no breaking waves - it seems like a nice place to swim - but it will pull you off-shore," . That day that is exactly what happened to two women and a 13-year-old boy.

The three were wading in shallow water when the rip tide grabbed them. By the time rescuers had swum 40 feet out from the shore to rescue them, the victims were already out twice that distance. When the rescuers were 80 feet out, the victims were out another 40 feet beyond them. "Unless you're there in seconds," one of the rescuers said, "it's too late."

You Can't Out Swim It

Currents can flow as fast as one meter per second — faster than any Olympic swimmer can swim. Swimming against such a current is like trying to run up a down escalator. So then, how do you avoid getting caught in a current, and if you do, how can you escape?

Some Safety Tips

First, pay attention to any warning signs on the beaches. If a red danger flag is flying, stay out of the water.

Second, if there aren't any lifeguards at the beach, don't go in swimming. U.S. Park Service Officials have never posted lifeguards at Ocean Beach even though people have died there. They feel that posting lifeguards would be implying the area is safe for swimming , thus giving visitors a false sense of security.

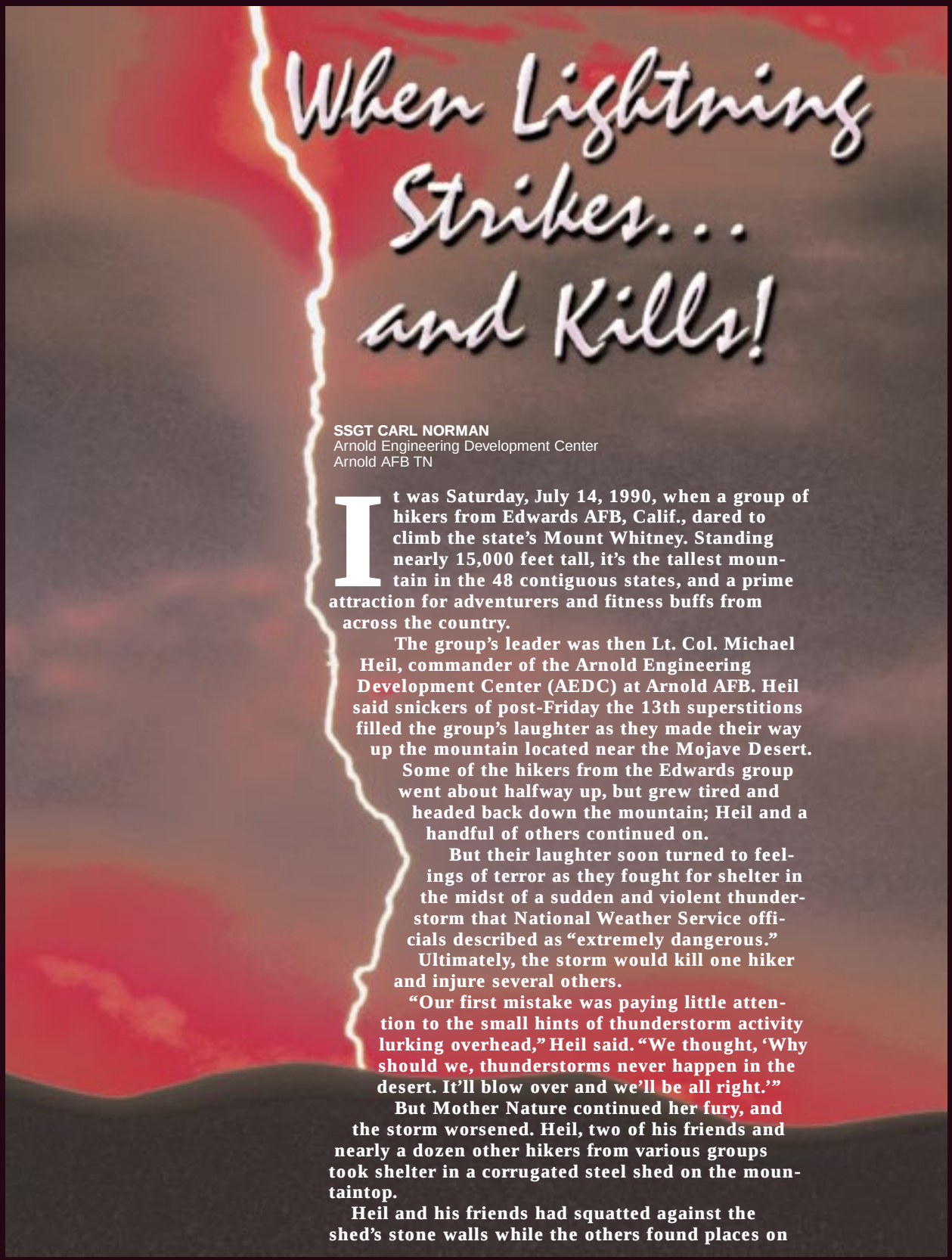
Third, don't overestimate your swimming ability, especially early in the summer when the water is still cold.

Fourth, swim only during daylight hours and make sure someone knows where you are and is close by, watching you.

Fifth, if you get into any kind of trouble in the water, signal for help by raising one arm. Don't panic — struggling will only exhaust you. Tread water or float until help arrives.

Sixth, if you get caught in a rip current, relax and swim toward shore at a 45 degree angle until you are free of the current. If the rip currents are strong, swim parallel with the shoreline in the same direction as the littoral current (the one that flows parallel to the beach). If you aren't able to swim out of the currents, call or wave for help.

Finally, when body surfing, don't ride the waves in a straight line toward the shore. Instead, surf at an angle to the waves. Stay away from the white water in the wave's center so that you don't "go over the falls" and end up being driven into the sand or rocky bottom. ■



When Lightning Strikes... and Kills!

SSGT CARL NORMAN
Arnold Engineering Development Center
Arnold AFB TN

It was Saturday, July 14, 1990, when a group of hikers from Edwards AFB, Calif., dared to climb the state's Mount Whitney. Standing nearly 15,000 feet tall, it's the tallest mountain in the 48 contiguous states, and a prime attraction for adventurers and fitness buffs from across the country.

The group's leader was then Lt. Col. Michael Heil, commander of the Arnold Engineering Development Center (AEDC) at Arnold AFB. Heil said snickers of post-Friday the 13th superstitions filled the group's laughter as they made their way up the mountain located near the Mojave Desert.

Some of the hikers from the Edwards group went about halfway up, but grew tired and headed back down the mountain; Heil and a handful of others continued on.

But their laughter soon turned to feelings of terror as they fought for shelter in the midst of a sudden and violent thunderstorm that National Weather Service officials described as "extremely dangerous." Ultimately, the storm would kill one hiker and injure several others.

"Our first mistake was paying little attention to the small hints of thunderstorm activity lurking overhead," Heil said. "We thought, 'Why should we, thunderstorms never happen in the desert. It'll blow over and we'll be all right.'"

But Mother Nature continued her fury, and the storm worsened. Heil, two of his friends and nearly a dozen other hikers from various groups took shelter in a corrugated steel shed on the mountaintop.

Heil and his friends had squatted against the shed's stone walls while the others found places on

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the floor, when a bolt of lightning sent a million volts of electricity through the shed and most of them.

"It burned holes in the sleeves of the jacket I was wearing and through other parts of my clothing. I couldn't feel my left arm or my big toe on my left foot for about half an hour after the strike," Heil said. "The electricity went through me to the person next to me and burned holes in his clothes and left a large burn mark on one of the guy's shoulders. It knocked two people in the shed unconscious."

After recovering, Heil and a few of the hikers put their cardiopulmonary resuscitation training (CPR) to work on the unconscious hikers. The colonel was part of the team working on 26-year-old Matthew Nordbrock who, Heil said, didn't have a heartbeat.

"We did CPR on this guy for about three hours before help arrived," Heil said. "We didn't know how long was long enough to do CPR on someone before deciding nothing more could be done, so we continued. Lightning kept striking around us all the while – it was a very intense situation."

Facing a literal life and death situation, two hikers from the huddled group braved the storm and started down the mountain, searching for help. They found a Boy Scout troop that had a hand-held radio and sent out word of what had happened.

Initial rescue came in the form of a medevac helicopter from the hospital in Lone Pine, a town nearby.

"They took Matthew and the other injured folks to the hospital, but Matthew died a short while later. After they took those two to the hospital, they brought us sleeping bags and rations," he said. "They told us we'd have to spend the night because the weather wasn't getting any better and it was getting dark and becoming too dangerous to attempt a rescue. So, we settled in for the evening."

The next morning an Army Chinook helicopter rescued the dozen and Heil's perspective on life hasn't been the same since.

"This showed me how precious every day is and how the unexpected can happen at any time," he said. "You need to make the best out of every day and be prepared when you go out someplace and most of all, treat Mother Nature with respect."

In the United States, between 75 and 100 people are hit and killed each year by lightning, according to Federal Emergency Management Agency (FEMA) statistics. FEMA officials say it's a myth that lightning never strikes twice in the same place. In fact, lightning will strike several times in the same place in the course of one discharge.

And that's something everyone should be aware of, according to Henry Steigerwaldt, science and operations officer for Nashville's National Weather Service.

"In the summer we're prone to have thunderstorms come up out of nowhere pretty quickly and those can have lightning in them," he said. "And don't think that since a storm cloud isn't directly over you that lightning can't strike, because it can – and often does – strike within many miles away of the actual cloud."

Surviving one of the most dramatic events of his life has left an imprint on Heil. Heeding Mother Nature's warning signs for bad weather is something he now takes very seriously.

"If I had paid closer attention to the weather, our group wouldn't have gone to the mountain that day," Heil said. "There are lessons here for all of us, and I hope no one else has to go through what I went through to learn them." ■

Short Circuits

Noteworthy News

Recalls...

The following vehicle recalls have been announced by the National Highway Traffic Safety Administration.

1999-2000 Honda Odyssey. Defect: On certain minivans a wire harness located within the engine compartment could be damaged by contact with a metal pipe, possibly resulting in a blown fuse. **Consequences:** If a fuse blows, engine power or operation of any or all electrical components could be lost including lights, windshield wipers, horn, and the anti-lock function of the brakes. A sudden loss of power or lighting, or a failure of the windshield wipers or anti-lock brake feature in bad weather, increases the risk of crash. (NHTSA Recall No. 00V030)

2000 Honda S2000. Defect: When the convertible top is down and the seats are pushed all the way back, the seat belts may not retract properly, resulting in slack in the seat belts. **Consequences:** This slack can reduce the protective capability and effectiveness of the seat belts and increases the risk of injury to an occupant in a crash. (NHTSA Recall No. 00V016).

2000 BMW 323i, 328i, 528i, 528iT, 540i, 540iT, M5, 740i, 740 iL, 750 iL. Defect: The brake lamps in these vehicles are controlled by a switch activated by the movement of the brake pedal. This switch could fail internally. **Consequences:** Failure of the switch could cause it to remain in the "brake lamps off" or the "brake lamps on" position. Should this happen, the brake lamps either will not operate or will be continuously illuminated, regardless of brake pedal position. (NHTSA Recall No. 00V048)

2000 Chrysler Concorde, Chrysler 300M, Chrysler LHS, Dodge Intrepid. Defect: A manufacturing molding error can prevent the operation of the G-lock and tilt lock functions on some of the driver's side seat belt retractors. **Consequences:** If this occurs in a frontal crash situation, driver protection provided by the seat belt may be reduced, increasing the risk of injury. (NHTSA Recall No. 00V033).

1999-2000 Dodge Intrepid, Chrysler Concord, Chrysler 300M, Chrysler LHS, Jeep Grand Cherokee. Defect: The seat belt shoulder height adjustable turning loop top mounting bolt was inadequately manufactured. **Consequences:** The mounting bolts may not withstand sufficient force to function properly in certain impact situations, increasing the risk of injury to a belted occupant. (NHTSA Recall No. 00V034/Chrysler Recall No. 866)

1994-95 Jeep Grand Cherokee, 1995 Jeep Cherokee. Defect: The front disc brake rotors of passenger and multi-purpose vehicles originally sold or currently registered in Connecticut, Illinois, Indiana, Maine, Maryland, Massachusetts, Michigan, New Hampshire, New Jersey, New York, Ohio, Pennsylvania, Rhode Island, Vermont, Wisconsin, and the District of Columbia, can experience severe corrosion if operated for an extended period in the "salt belt." **Consequences:** If rotors are not replaced, the corrosion can eventually compromise the structural integrity of the rotor's stamped steel center hub section. The reduced strength can allow the cast iron wear surface to separate from the hub, reducing the braking effectiveness of the vehicle. (NHTSA Recall No. 99V340/Chrysler Recall No. 747)

2000 Chevrolet S10, Chevrolet Silverado, GMC Sonoma, GMC Sierra. Defect: On certain light duty trucks equipped with 4-wheel disc brakes, the Antilock Brake System motor contains an out-of-specification spring clip. **Consequences:** This clip could allow the motor bearing to become misaligned. If misalignment occurs, eventually the ABS will become non-functional. The base brakes would remain minimally functional, but the Dynamic Rear Proportioning System -- which optimizes the front-to-rear brake balance -- would become inoperative, increasing the likelihood of crash. (NHTSA Recall No. 00V055/GM Recall No. 00013).

1996-97 Suzuki Sidekick. Defect: Insufficient strength of the mounting base on the upper end of the front struts on these sport utility vehicles can lead to breakage of the mounting bolts that attach the upper end of the front struts to the vehicle body. **Consequences:** If a strut breaks loose, a driver could lose control of the vehicle, increasing the risk of a crash. (NHTSA Recall No. 00V008/Suzuki Recall No. W2)

1998-1999 Dodge Durango. Defect: The fuel tank strap can separate due to fatigue during vehicle operation. **Consequences:** If this occurs, the tank will be unsupported, thus increasing the risk of a fuel leak. (NHTSA Recall No. 99V342/Chrysler Recall No. 842)

1999 Dodge Durango. Defect: The rear brake tube can contact an underbody crossmember, eventually wearing a hole in the tube. **Consequences:** If the tube is perforated, there will be a reduction in the braking ability of both rear wheels, leading to increased stopping distances. (NHTSA Recall No. 99V341/Chrysler Recall No. 841)

2000 Dodge Intrepid, Chrysler 300M, Chrysler Concorde, Jeep Grand Cherokee. Defect: The passenger airbag inflator assembly contains an incorrect amount of inflator charge. **Consequences:** This condition could increase the risk of passenger occupant injury under certain crash conditions. (NHTSA Recall No. 99V343/Chrysler Recall 858)

2000 Dodge Ram Truck. Defect: The welds at the right-side lower control arm bracket-to-axle tube attachment may have inadequate fatigue life due to poor weld quality. **Consequences:** This can lead to separation of the control arm bracket from the axle tube. If the bracket separates, the vehicle could experience reduced directional stability, braking degradation and/or pulling to the side during braking. (NHTSA Recall No. 00V007/Chrysler Recall No. 861)

2000 Ford Windstar. Defect: These minivans may have been built with an incorrect urethane adhesive, resulting in an adhesive bond rather than the intended molecular bond for the front windshield and rear liftgate glass. **Consequences:** If the bond deteriorates, it could provide less than the intended level of glass retention in the event of a crash. (NHTSA Recall No. 00V020/Ford Recall No. 00S01)

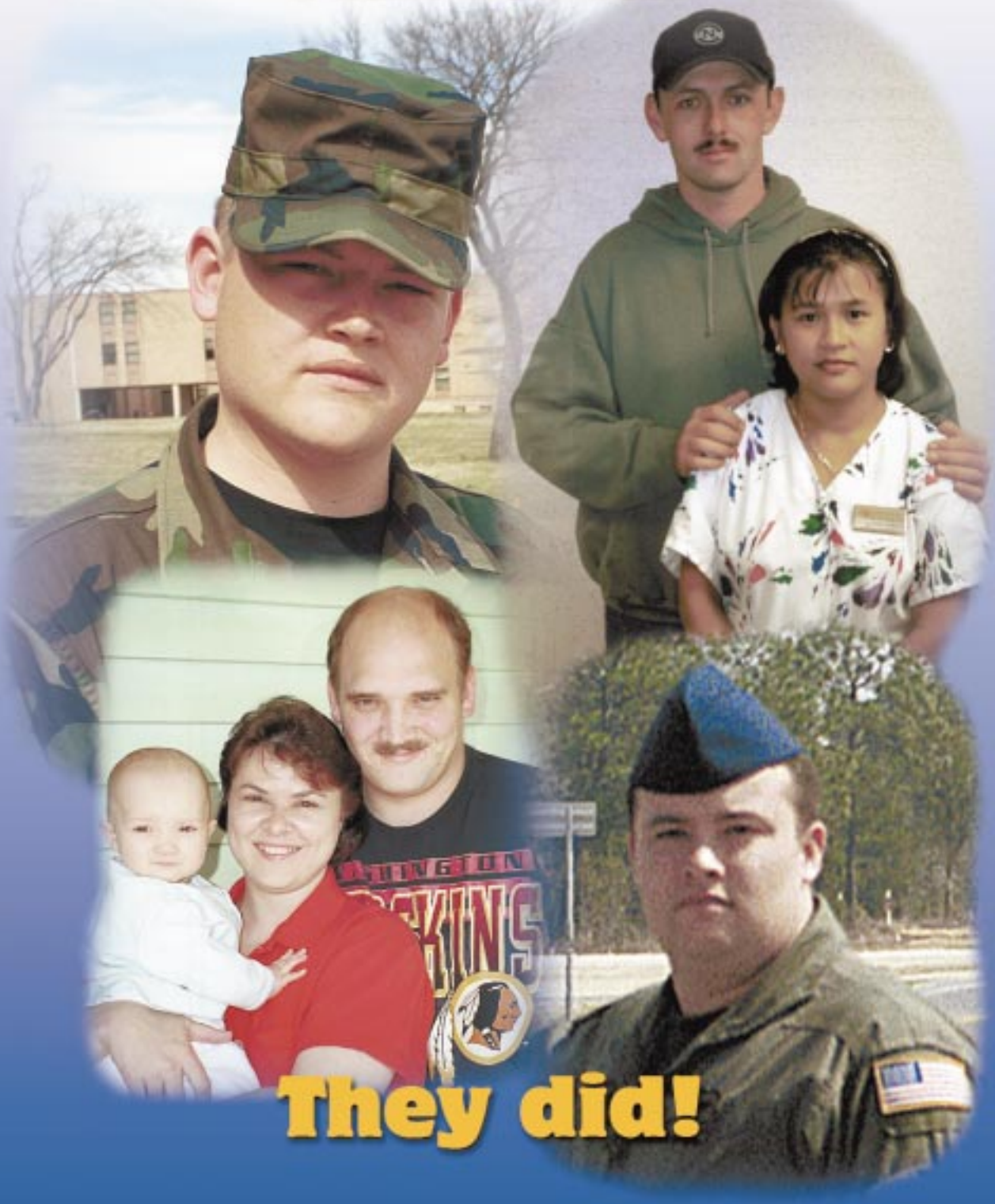
2000 Ford Contour. Defect: An incorrect label was installed on the driver side rear door. This label contains instructions for the activation of the childproof safety locks. **Consequences:** The owner of the vehicle may believe the childproof safety lock is activated when it is not, potentially allowing the door to be opened from the inside. (NHTSA Recall No. 99V361/Ford Recall No. 99L02)

2000 Saturn L-Series. Defect: Fuel tank assemblies in these vehicles have an Over Pressure Relief valve that can become stuck open in a frontal collision. **Consequences:** If the vehicle rolls over, fuel spillage could occur and, if an ignition source is present, a fire could result. (NHTSA Recall No. 99V/340/GM Recall No. 99087/Saturn Recall No. 00C08)

1994 Mazda 626, Mazda MX6. Defect: The headlight wire that runs through the turn signal lever can fail at a point where it is soldered to the headlight switch. **Consequences:** The failure of this wire could lead to the loss of headlights, increasing the risk of a crash. (NHTSA Recall No. 99V358/Mazda Recall No. 87004)

Owners who do not receive a free remedy within a reasonable amount of time should contact the following telephone numbers: **Honda, 1-800-999-1009; BMW, 1-800-831-1117; Chrysler, 1-800-992-1997; Chevrolet, 1-800-222-1020; GMC 1-800-462-8782; Suzuki, 1-800-934-0934; Ford, 1-800-392-3673; Saturn 1-800-553-6000, Prompt 3; Mazda, 1-800-222-5500.** ■

Safety doesn't just happen. Plan for it...



They did!