

Air Education and Training Command's  
**TORCH**  
Spring 2013



**WHAT'S UP DOC?**  
Physician turned pilot studies  
physiological effects in F-22  
PAGE 22

**FOUR-FINGER  
DISCOUNT?**

Preventable mishaps  
'stealing' digits  
at record clip

PAGE 14

**'I KILLED MY BEST  
FRIEND'S SISTER'**

Airman rolls car  
because he was  
texting and driving

PAGE 8

**GIRL ON FIRE**

Airman gets burned by flash  
fire. Did fire-retardant flight  
suit work as advertised?

PAGE 16



# KC-135 STRATOTANKER

“[Airplanes are]  
near perfect; all  
they lack is the  
ability to forgive.”

— *Richard Collins*  
*Pilot, aviation author and journalist*



**TORCH**   
www.torch.aetc.af.mil | www.facebook.com/aetc.torch

### 8 'I Killed My Best Friend's Sister'

An Airman rolls his vehicle in Idaho while texting and driving. He survives, but one of his passengers isn't so fortunate.

### 14 Four-finger Discount?

COVER STORY

Across the Air Force, Airmen are losing their fingers at a surprising clip. As a matter of fact, the number is closing in on double digits. See how people are slicing, dicing and clawing and sawing their fingers off. ... And find out how you can avoid doing the same.

BY TECH. SGT. SAMUEL BENDET



### 16 Girl on Fire!

Long before the release of the hit song by Alicia Keys and the Hunger Games movie that further popularized the phrase, Staff Sgt. Erica Luke was the "Girl on Fire" ... literally. See if her fire-retardant flight suit worked as advertised when she found herself engulfed in a flash fire.



### TORCH TALK 2

Readers discuss sleeping with pets, a T-38 losing its wing, driving in an ice storm, mishaps increasing after returning from deployment, fire ants, photos, getting hit by an 18-wheeler and more.

### AROUND THE COMMAND 4

When train slams into parade, master sergeant answers call ... 'Caged' Drivers Watch Out: Avoiding motorcycle mishaps takes two- and four-wheeled drivers ... Three fatalities in two weeks ... Best ground safety program.



### TALES OF THE STRANGE 6

Lightning Jackpot? Oklahoma man struck six times ... Lightning myths.

### THE ALERT CONSUMER 7

Diet Drinks + Alcohol Make You Drunker: Cutting calories with your cocktails could expose you to more hazards.

### HANGAR FLYING 22

What's Up Doc? F-22 pilot-physician takes safety to new heights.



### CLEAR THE RUNWAY 24

Distress Call: Air Force trainer pilot provides critical support as civilian aircraft goes down ... For the Birds: Falcons run off smaller birds to protect bigger ones ... Spatial disorientation leads to F-15E crash, death of pilot.

Spring 2013

Volume 20, Number 1

TORCH is published quarterly to help promote safety awareness in Air Education and Training Command, the Air Force and Department of Defense. This funded Air Force magazine is an authorized publication for members of the U.S. military services. Contents of TORCH are not necessarily the official view of, or endorsed by, the U.S. Government, the Department of Defense or the Department of the Air Force. The editorial content is edited, prepared and provided by the Directorate of Safety, Air Education and Training Command, Randolph Air Force Base, Texas, following public affairs publication guidelines outlined in DOD Instruction 5120.4 and Air Force Instruction 35-101. All photographs are Air Force photographs unless otherwise indicated.

**Gen. Edward A. Rice Jr.**  
*Commander*

**Col. Tal W. Metzgar**  
*Director of Safety*

**Timothy P. Barela**  
*Editor*  
[timothy.barela@us.af.mil](mailto:timothy.barela@us.af.mil)

**Sammie W. King**  
*Senior Designer*  
[sammie.king@us.af.mil](mailto:sammie.king@us.af.mil)

**David M. Stack**  
*Designer*  
[david.stack@us.af.mil](mailto:david.stack@us.af.mil)

**Tech. Sgt. Samuel A. Bendet**  
*Photojournalist/Designer*  
[samuel.bendet@us.af.mil](mailto:samuel.bendet@us.af.mil)

#### Subscriptions and Contributions:

To request unit subscriptions or address changes, or to submit articles, photographs or artwork, e-mail information to [torch.magazine@us.af.mil](mailto:torch.magazine@us.af.mil). Or you can write to: Editor, TORCH, HQ AETC/SEM, 244 F Street East, Suite 1, Randolph AFB, TX 78150-4328. You also can fax to: (210) 652-6982 or DSN: 487-6982. For customer service, call (210) 652-5818 or DSN 487-5818. Include your name, full unit address, phone number, fax number and e-mail address on all submissions. Unit distribution is based on a ratio of one copy per seven persons assigned. For personal subscriptions, call toll free 1-866-512-1800 or write to New Orders, Superintendent of Documents, P.O. Box 371954, Pittsburgh, PA 15250-7954.

Visit Our Web Site:  
[www.torch.aetc.af.mil](http://www.torch.aetc.af.mil)

Check Us Out on Facebook:  
[www.facebook.com/aetc.torch](http://www.facebook.com/aetc.torch)



## FROM THE DIRECTOR

By Col. **TAL W. METZGAR**  
*AETC director of safety*



## 'I DIDN'T THINK ...'

**D**o you see a familiar pattern in the following statements? "I didn't think ... the blade on the table saw was *that* high." "I didn't think ... I was reaching too far (atop a ladder)." "I didn't think ... anything would happen; I've done it this way before." "I didn't think ... it would happen to me."

How many times in the aftermath of a mishap have you heard the phrase, "I didn't think ... (finish the sentence)?" Or, "If only I had stopped a minute to think about it."

On the safety front, it's been a difficult start to fiscal year 2013 for the Air Force. As we approach the halfway point, we are on a pace to double our on-duty fatality rate from the previous two years — all of them preventable mishaps. Additionally, the Air Force is ahead of last year's off-duty fatality rate, with the majority of mishaps occurring while operating private motor vehicles, mostly motorcycles, followed by automobiles and pedestrians on or near roadways ... and the Critical Days of Summer are still in front of us.

It's time to STOP ... and think! Think about how you will achieve the desired outcome and avoid unwanted potentially catastrophic "alternate endings."

World-class athletes use "visualization" as a technique to realize their goals. By seeing an event in their mind prior to the attempt,

visualization enables athletes to focus on the key components, anticipate and counter problems, then successfully reach their goal. This is the foundation of the risk management process. Albeit not as detailed, over the years, the Department of Defense has used the same concept to develop risk management principles and slogans to achieve a similar result; for example, "Look, Think, Do" or the classic "OODA" loop, Observe, Orient, Decide, Act.

Whatever technique you employ, the bottom line is to use your intellect to overcome your natural tendencies to "jump in and do it." Amazingly, these principles work on- or off-duty. If only I had stopped to think about the consequences of that "stupid human trick" while trying to impress my friends.

While our senior military and government leaders expend intellectual capital wrestling with budget reductions and transformational change to reduce costs and maintain mission effectiveness, we must also pause — and think — as we continue to apply sound risk management principles and personal discipline to preserve precious, irreplaceable resources. All of our "cost saving" efforts and "change initiatives" will be negated if we fail to reduce costly mishaps.

Don't let 2013 be an unlucky year for you! Remember, each one of us has the authority and responsibility to call "knock-it-off" when the risk outweighs the potential benefit. Let's replace "I didn't think" with "I stopped to think ..." (then finish the sentence with a success story).

**"All of our 'cost saving' efforts and 'change initiatives' will be negated if we fail to reduce costly mishaps."**

# SLEEPING WITH CHUPACABRAS?

Sleeping with pets can kill you (Winter 2012 Torch, page 7)? Well, maybe if your pet is a rattlesnake ... or a chupacabra. Otherwise? Nonsense! I've been sleeping with pet dogs since I was 6 years old. I'm now 73 and perfectly healthy. I've never gotten so much as a single flea or tick. The problem with the internet today is that it makes people afraid of their own shadow.

J.D. Woller  
Retired Army Reserve



BY SAMMIE W. KING

## 'FRAME' OF REFERENCE

After receiving your magazine from a retired chief master sergeant and reading your cover story ("A Broken Wing and a Prayer," Winter 2012 issue), our aircrew flight equipment team at Scott Air Force Base, Ill., is going to mat and frame the story and T-38 artwork in our shop (formally life support).

Our goal is to use this story as a simple

reminder to the pilots we serve that you always need to be prepared and when accidents happen, we have you covered.

Thank you for the amazing article, and continue the outstanding work! If you ever make it to Illinois, stop by our shop and check it out.

Staff Sgt. Nathan P. Allison  
Scott Air Force Base, Ill.

## INSTINCT TO SURVIVE

We loved your cover story in the latest Torch magazine, "A Broken Wing and a Prayer" (Winter 2012 issue). It features one of our Civil Air Patrol members, Mike Hainsey, who is a lieutenant colonel in CAP's Mississippi Wing. We are linking the story to VolunteerNow ([www.capvolunteernow.com](http://www.capvolunteernow.com)), CAP's national news Web site, so our organization's 61,000-plus members can know more about the accident and these two Airmen's instincts to survive.

Steve Cox  
Civil Air Patrol National Headquarters, Maxwell Air Force Base, Ala.

## BRAVING AN ICE STORM



BY TECH. SGT. SAMUEL BENDET

I am so glad that Staff Sgt. Crystal Salierno survived her ordeal, and I was relieved to read her mother is in remission from leukemia. I totally understand why she braved the ice storm to try to spend the holidays with her ailing mom. But her mother would have been devastated if her daughter had been killed in that crash. That certainly wouldn't

have helped her recovery. I'm happy everything worked out in the end. And a *BIG* thank you to Crystal for sharing her story. I'm sure many of us would have made the same mistake — especially given her circumstances. But her story definitely makes you think twice.

Ellen Billings  
Via e-mail

## MORE TO COME? ...

Interesting read in your Winter 2012 issue (page 12) ... "Home Field Disadvantage: Study Shows Military Members Returning from Deployment Getting in More Mishaps." Now it'll be interesting to see what the services do about it ... hope to read about that in one of your upcoming issues.

"Sam" Samudio  
Via e-mail



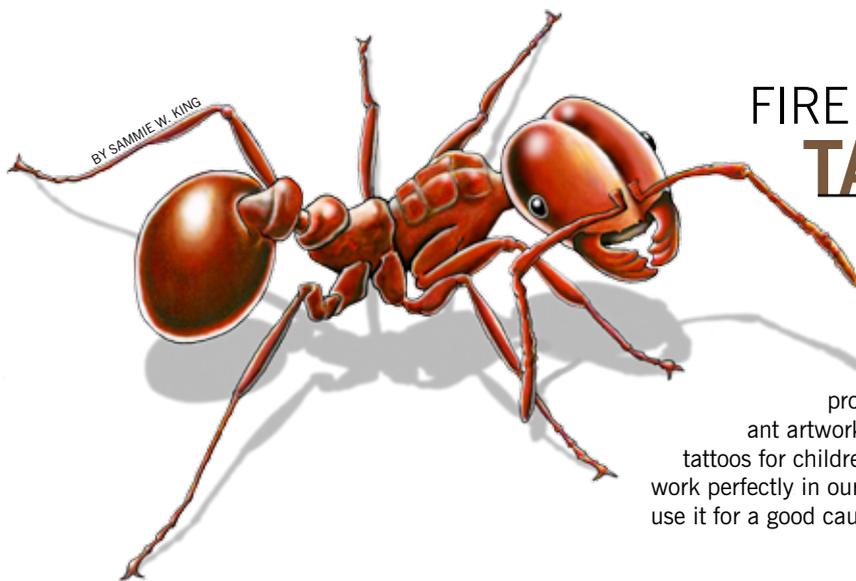
### LETTERS TO TORCH

Have a comment or complaint? Letters to Torch may be sent via e-mail to:

[torch.magazine@](mailto:torch.magazine@us.af.mil)

[us.af.mil](mailto:us.af.mil). Or mail to Torch Editor, HQ AETC/SEM, 244 F Street East, Suite 1, Randolph AFB TX, 78150-4328, or fax to DSN 487-6982 or commercially to (210) 652-6982.

For customer service, call DSN 487-5818, or commercially at (210) 652-5818. Please include your name, address and phone number.



## FIRE ANT TATTOOS

I am the public information officer for the Coachella Valley Mosquito and Vector Control District. We are a government agency working to protect residents of Coachella Valley from vector-borne disease. Our efforts include physical, biological and chemical control as well as public outreach to encourage prevention and protection. As a promotional campaign we are using your fire ant artwork (May/June 2008 Torch, page 6) to produce temporary tattoos for children at an upcoming fair. It is a wonderful illustration and will work perfectly in our public health promotion campaign. Thanks for letting us use it for a good cause ... protecting citizens from harm.

*Jill Oviatt  
Indio, Calif.*

## PHOTO 'FUELS' THEM

I am an instructor with the 364th Training Squadron Fuels Advanced Courses. In our schoolhouse, we have several hallways with hundreds of photos of our fuels Airmen around the globe in action. In the 2012 Torch Calendar for October, there is a photo of three R-11s refueling a C-5 Galaxy. It looks like it's at Balad Air Base, Iraq. This is a great photo! Our staff is very excited to display it in our deployment-themed classroom. Thank you very much!

*Tech. Sgt. William Stapp  
Sheppard Air Force Base, Texas*



BY STAFF SGT. SUZANNE M. JENKINS

## FIGHTING FOR HIS LIFE

I feel the need to share something that recently affected me rather profoundly. It involves both situational awareness and distraction while driving.

On the evening of Dec. 21, Mark, a good friend of mine, was on his way home at about 9:30 p.m. on the north side of San Antonio. He had a flat so he pulled off to the side of the road to change it.

Somewhere in the process, an 18-wheeler hit him!

He was life-flighted to the hospital in critical condition. He suffered a head injury, broken ribs, fractures to both legs, a broken

foot, and horrible fractures to both arms.

Mark was barely clinging to life. But he's a fighter! Mark is in his early 40s and has four young children at home who need him. So he fought. By the grace of God, he is still alive today ... but also still hospitalized. Countless surgeries have been required to fix his broken body.

By all rights, he should not even be alive considering the damage he sustained from the impact. He even ended up having to have his badly mangled left arm amputated just below the elbow. It was weeks before the youngest of his children were allowed to

see him because his wife feared his appearance would be too traumatic.

So whose fault was it? That remains to be seen. Maybe Mark wasn't as in the clear as he thought. Or maybe the driver of the 18-wheeler wasn't paying enough attention. Either way, this could have been avoided, and a father would not be lying broken in a hospital bed awaiting yet more surgeries and many months of physical therapy.

Stay safe, stay alert and stay focused!

*Billy A. Burt  
Joint Base San Antonio-  
Lackland, Texas*

## SIMPLY THE BEST

I've been reading Torch since the mid-90s, and it continues to be the best in its genre and the best in the Department of Defense. I've shared many of your safety articles. Keep up the excellent work.

*Ross Koty  
Via e-mail*

## TAKING CARE OF DEPLOYED AIRMEN

A big thank you and kudos from our Airmen downrange. Your remarkable efforts in customer Service and keeping our deployed folks safe are deeply appreciated.

*Brian Raphael  
Kirtland Air Force Base, N.M.*



BY TIM FISCHER/MIDLAND REPORTER-TELEGRAM

A freight train going nearly 60 mph hit a parade float full of wounded veterans and their spouses in Midland, Texas, Nov. 15, killing four and injuring 17.

## WHEN TRAIN SLAMS INTO PARADE, MASTER SERGEANT ANSWERS CALL

**GOODFELLOW AIR FORCE BASE, Texas** — When a freight train slammed into a parade float in Midland, Texas, Nov. 15, killing four people and injuring 17 others, a heroic Airman here used his Self-Aid and Buddy Care training to help ensure the death toll didn't rise even further.

Master Sgt. Christopher Doggett, a military training leader at Goodfellow, was participating in a Hunt for Heroes parade, honoring wounded veterans. Doggett had been wounded by enemy forces while deployed to Khobar Towers, Saudi Arabia, in support of Operation Southern Watch. His combat injuries earned him a Purple Heart and an invitation to Midland's hunting trip and parade. Doggett, along with nearly two dozen other veterans and their spouses, would ride through the town on trailer floats pulled by trucks, while crowds of people cheered for them.

The parade route crossed railroad tracks. "My wife and I were on the first trailer in the parade; and as we crossed the train tracks, we saw a train moving toward us," Doggett said. "We began yelling at the second trailer (which was still on the tracks)."

He jumped off the first trailer and started running toward the second.

"I was praying it was completely clear of the track; it, unfortunately, wasn't," he said.

As the train, traveling at nearly 60 mph, impacted the float, Doggett automatically went into battle mode.

"My first thoughts were to clear out the wives to keep them from seeing things they weren't prepared to see," he said. "I'm not sure anyone can be prepared for such a sight though."

One of the first people he saw was a woman whose leg had been severed. Two men were already providing CPR.

"I asked a woman behind me for her belt to apply a tourniquet to stop the bleeding," Doggett said. "We all counted chest compressions, and after a few cycles she began to breathe."

The train had stopped moving, but it took extra time for paramedics to respond because of the blocked roads. The uninjured veterans from each float used their military training to help every injured person.

"As I stood there and looked at the destruction that had happened, you could see that each member was being attended to by at least one of the military members on the floats," Doggett said. "Everyone did exactly as they were supposed to do. Without the training we receive and the scenarios we go through, more lives would have been lost."

Tragically, four veterans who had pushed their wives off the float just in time to save them from being a casualty paid with their own lives.

"They to me are the heroes," Doggett said. "They pushed their wives to safety before impact, again spilling their blood for U.S. citizens."

— Airman 1st Class Erica Rodriguez  
17th Training Wing Public Affairs



USAF PHOTO

**Master Sgt. Christopher Doggett** was awarded the Air Force Commendation Medal and the 2013 Noncommissioned Officers Association Vanguard Award for his heroic actions in Midland, where he acted as a first responder to those injured during the train crash.

# 'CAGED' DRIVERS WATCH OUT

## AVOIDING MOTORCYCLE MISHAPS TAKES TWO- AND FOUR-WHEELED DRIVERS

WASHINGTON — Col. Dana Morel knows the dangers of motorcycles as well as anyone.

A biker herself, Morel was a lieutenant at Mather Air Force Base, Calif., in 1986 when a young Airman she knew with the base honor guard took off speeding one night. Distraught over the end of a romance, he missed a turn and crashed his motorcycle into a telephone pole. He died at the scene.

As traumatic as that was, nothing could prepare Morel for a crash that happened last July that took the life of her good friend and fellow biker, Tyler Cowherd, and left his wife, Carolyn, and a friend who was riding with them permanently disabled.

The Cowherds on one Harley-Davidson motorcycle, and their friend on another, were traveling westbound on a Springfield, Va., road on the evening of July 17 when an eastbound car turned in front of them, causing both bikes to crash into the side of it.

The motorcycles could not have stopped in time to avoid the collision, and the driver of the car was charged with failing to yield,



Col. Dana Morel gets ready for a ride on her 2008 Harley-Davidson Heritage motorcycle in Lorton, Va.

according to the police report. Morel says she has struggled to accept the fatal crash “that was so avoidable.” She now speaks out about the need for “caged” drivers — those protected by a car or truck chassis — to be more aware of motorcycles and their vulnerabilities and to slow down and not be distracted drivers.

“I like to think that most motorcyclists are safe [drivers],” she said. “But, you’re completely vulnerable, completely exposed. When you get in a car, you don’t think that much about it.”

While motorcycle courses teach about road conditions and situations hazardous to bikers, regular driving classes rarely mention motorcycles, Morel said.

The colonel commutes by Metro bus each day to the Pentagon where she is a deputy division chief in an Air Force acquisitions office. She says she has been dismayed by the various things people do while driving.

Morel said she’s observed drivers texting, talking, tuning the radio, eating and putting on makeup.

“People are so distracted,” she said. “I see text messaging [by drivers] every single day when I’m on the bus. They’re taking their eyes off the road for things that have absolutely nothing to do with driving.”

— Lisa Daniel  
American Forces Press Service

### THREE FATALITIES IN TWO WEEKS

Air Education and Training Command suffered three motorcycle mishap deaths during a two-week timespan in March.

A technical sergeant from Goodfellow Air Force Base, Texas; a second lieutenant from Laughlin AFB, Texas; and a staff sergeant from Luke AFB, Ariz., lost their lives while riding motorcycles on March 10, 15 and 24, respectively. All three mishaps are still under investigation.

“We are entering springtime, and with the warmer weather, motorcyclists will be out in droves,” said John Foreman, AETC Ground Safety Division. “Riding motorcycles can be dangerous, but AETC has proven that it can beat the odds. We went 934 days — nearly three years — without a motorcycle fatality (from Sept. 30, 2009, to April 21, 2012). With a recommitment and renewed focus from all, we can do it again.”

## BEST GROUND SAFETY PROGRAM

JOINT BASE SAN ANTONIO-RANDOLPH, Texas — Air Education and Training Command Safety earned the Colonel Will L. Tubbs Memorial Award for ground safety for fiscal 2012.

The award recognizes the most effective major command, direct reporting unit or forward operating agency ground safety program.

“We’re very excited about this award because it captures a command-wide success story,” said Col. Tal Metzgar, AETC director of safety. “The Tubbs award recognizes the leadership of the headquarters safety staff, wing safety professionals, line-level supervisors and individual Airmen and civilians who own mishap prevention.”

Reduction of military and civilian injuries and fatalities is the primary selection criteria for the award, and AETC led the way with

zero on-duty fatalities in fiscal 2012 and a 33 percent drop in fatalities from the 10-year average.



“While it is impossible to attribute this reduction to any one cause, we’ve been working for several years to create a great safety culture in AETC,” said Edward Talbott, AETC Ground Safety Division manager. “Our commanders, supervisors, military training leaders and technical training instructors do a great job of conveying great safety messages to all our Airmen. This improved safety culture means Airmen are keeping risk management in their thoughts, and we have less injuries and fatalities occurring across the command.”

— Tech. Sgt. Beth Anschutz  
Air Education and Training Command Public Affairs

# LIGHTNING JACKPOT?

## OKLAHOMA MAN STRUCK SIX TIMES

The odds of being struck by lightning more than once in your lifetime are one in 360 billion, according to Ken Mellendorf, a physics professor at Illinois Central College.

Meet Carl Mize ... the guy who gives odds-makers headaches. He has been zapped by lightning six times!

"Some people say I'm unlucky, but I think I'm kind of lucky to be alive," said Mize, a utilities worker at Oklahoma University in Norman, Okla.

Mize's first encounter with lightning was at a rodeo in 1978 when lightning struck the truck he was touching. It knocked him down, but he suffered no serious injury. The second time, in 1994, Mize was holding a crowbar when lightning hit a nearby telephone pole. The lightning traveled through the pole and crowbar, ripping the metal bar from his hand and giving him quite a jolt ... but still no severe damage.

Two years later in 1996, lightning zapped him a third time while he was "lying down on the job." The lightning split a nearby tree and traveled into some underground cables he held. Mize was hospitalized for three days as the current went into his chest.

"When struck, you feel like you've had the heck beat out of you," Mize said. "All of your muscles are tight, and you hurt all over."

The fourth strike happened at his Norman home in 1999. While his family took cover in the basement from an approaching tornado, Mize was outside when the lightning hit a tree and traveled through a swing chain he held in his hand.

The fifth strike came in 2005 while he repaired a water main. That strike led to an abnormal heart rate, landing Mize in the hospital again.

"I'm more nervous now than I was years ago," Mize said. "I kept thinking, 'It can't happen again,' but it did."

The sixth and latest strike happened in 2006 when Mize, who raises livestock, was trying to cover some hay before an approaching storm.

"My life didn't change too much until the last strike in 2006. I guess I'm getting

older and am worried if I get struck again it may kill me," the 52-year-old said. According to Mize, his wife, three daughters and eight grandkids have become his own storm warning system.

"My daughters freak out every time there is a storm in the area," Mize said. "My friends will e-mail me or text me when there is a storm coming to tell me to go inside."

Roy Sullivan, a park ranger at Shenandoah National Park for 36 years, holds the world record with seven lightning strikes between 1942 and his death in 1977.

Although he's close, Mize says he would rather retire than be so "lucky" with lightning.

"I don't want to break the record for strikes," he said. "I'm very afraid of being struck again."

His advice to others if there is a storm in the area? "Stay inside!"

— Tech. Sgt. Beth Anschutz  
Air Education and Training  
Command Public Affairs



## LIGHTNING MYTHS

**MYTH:** Lightning never strikes the same place twice.

**FACT:** Lightning often strikes the same place repeatedly, especially if it's a tall, pointy, isolated object. The Empire State Building is hit nearly 100 times a year.

**MYTH:** If it's not raining or there aren't clouds overhead, you're definitely safe from lightning.

**FACT:** Lightning often strikes more than three miles from the center of the thunderstorm, far outside the rain or thunderstorm cloud. "Bolts from the blue" can strike 10 to 15 miles from the thunderstorm.

**MYTH:** If trapped outside with lightning, I should lie flat on the ground.

**FACT:** Lying flat increases your chance of being affected by a potentially deadly ground current. If caught outside, keep moving toward a safe shelter.

**MYTH:** A lightning victim is electrified. If you touch them, you'll be electrocuted.

**FACT:** The human body does not store electricity. It is perfectly safe to touch a lightning victim to give them first aid.

— National Oceanic  
and Atmospheric Administration

# DIET DRINKS + ALCOHOL

## 'POUR' JUDGMENT

### CUTTING CALORIES WITH YOUR COCKTAILS COULD EXPOSE YOU TO MORE HAZARDS

If you're trying to cut calories by mixing diet drinks with your cocktails, you might want to reconsider your approach to a thinner waistline. Vodka and seltzer. Rum and diet cola. Whiskey and water. These common cocktails served up with low- or no-calorie mixers get you drunker, faster than full-cal versions of the drinks, according to a new study — and expose diet-cocktail drinkers to possible safety risks.

Dennis L. Thombs, PhD, of the University of North Texas Health Science Center, previously found that bar patrons who drink alcohol with diet drinks leave the bar more intoxicated than those consuming full-calorie drinks. A new study published in the journal *Alcoholism: Clinical & Experimental Research* is the first to confirm Thombs' finding in a lab setting.

The study quantified lo-cal drinking's impact — 18 percent higher blood alcohol levels. One of the study's authors suggested why sugary drinks keep you more sober.

When you mix alcohol with regular soda, juice, or another mixer with sugar and calories, your body treats your drink more like food, according to researcher Cecile A.

Marczinski, PhD, an assistant professor of psychology at Northern Kentucky University. The drink stays in your stomach longer, as a result, and the alcohol is absorbed into your bloodstream more slowly. When you drink alcohol with a diet mixer, the drink

---

**“What we found was, when people consumed the same amount of alcohol with a diet drink instead of regular, their [blood alcohol levels] were 18 percent higher.”**

---

flows through your digestive system faster, allowing your small intestine to release more alcohol into your bloodstream.

“Just as we've known for a long time that eating food with alcohol slows your body's absorption of alcohol, sugary drinks also appear to keep alcohol in the stomach longer, which is a good thing,” according to Marczinski.

In the study, Marczinski and her team dosed participants with either vodka mixed with Squirt or diet Squirt. Researchers recorded the participants' blood alcohol content and asked them to rate their level of intoxication, fatigue, impairment and willingness to drive. Although the subjects had higher blood alcohol levels after drinking the diet drinks, they did not *think* they were more intoxicated.

“What we found was, when people consumed the same amount of alcohol with a diet drink instead of regular, their [blood alcohol levels] were 18 percent higher,” Marczinski said. “But I think probably nobody realizes that this is a concern, so awareness of this effect is the key thing.”

Women should be especially aware of this effect, Marczinski says. They're more likely than men to order alcohol with diet drinks, and women are already more sensitive to the effects of alcohol.

Marczinski's safe drinking tip? Alternate between alcoholic drinks and something non-alcoholic to both limit calorie consumption and keep intoxication levels in check.

— Annie Hauser, *Everyday Health*

# 'I Killed My Best Friend's Sister'

Airman crashes vehicle while **texting** and driving

By Tech. Sgt. **BETH ANSCHUTZ**

Photo by Airman 1st Class **BRITTANY CHASE**

Photo composite by **DAVID M. STACK**

**Still bearing a physical scar** on his left arm from a texting and driving crash just more than three years ago, Senior Airman Caleb Zody says the emotional scars from that day are much tougher to overcome.







Certain memories of the accident are clear in Senior Airman Caleb Zody's mind, but other details are foggy. For instance, he remembers with chilling clarity the feeling of the car skidding and flipping. He can't recall, however, the subject of the text he traded for the life of his best friend's twin sister.

It's been more than three years since Zody, an F-15E Strike Eagle weapons mechanic with the 366th Aircraft Maintenance

Squadron at Mountain Home Air Force Base, Idaho, crashed his vehicle in the texting and driving mishap near the base. Sept. 16, 2009, the day of the accident, had marked the one-year anniversary of him leaving his home in Glendive, Mont., for the first time on his way to Lackland AFB, Texas, to begin basic training. But with the click of a keypad, one of the best days of his life turned into the worst.

Ironically, he had been doing a favor for his friend and co-worker Airman Jacqlyn Weir with her safety in mind. Her twin sister, Jessica, was flying into town for a visit. But since Weir had worked the nightshift and hadn't slept, Zody offered to drive the Airman to the airport in Boise to pick up her sister. That way she



**After rolling his 1994 Honda Accord three times, Zody had to have 4 inches of muscle stitched together and sewn back into his left arm and multiple stitches and staples put into his head. His car, pictured, shows the blood-soaked driver's seat stained by his severe head injury, leaving little wonder why the Airman suffered a concussion and memory loss.**

**“My memory is foggy, but I do remember that I was on the phone texting and (steering) with my knee.”**

He said he had managed to text and drive with his old phone without incident. But with his new phone and its unfamiliar keyboard, texting while driving wasn't as easy.

Zody passed mile marker 90 on Highway 84, which is the first exit for Mountain Home. He said he would have normally taken this exit, but the three had plans to drive through town before heading to base. So, Zody decided to take the next exit.

“My memory is foggy, but I do remember that I was on the phone texting and [steering] with my knee,” he said.

Traveling in the left-hand lane of the four-lane highway, Zody's car drifted toward a grassy median separating the east and westbound lanes.

“I'm not sure if I didn't notice the car drifting or if my knee had slipped,” Zody said. “Jacqlyn saw I wasn't paying attention and grabbed the wheel from the passenger seat, trying to straighten the vehicle.”

Zody said that was when the car shot across the lane into the right shoulder.

“I still remember the feeling of the car skidding and flipping,” he said. “The traction ... the fight against the turn ... and then nothing.”

The car flipped three times. Although Zody says he asked both girls to put on their seat belts, Jessica wasn't wearing hers and was thrown from the vehicle. Emergency response personnel found her close to 100 feet from the crumpled car.

“I was trapped in the car in absolute hysterics,” he said. “I was sobbing and screaming, *I'm so sorry! I swear I didn't mean to do this! I'm so sorry!*” My friend, I don't know how, while physically being able to see her twin sister

laying there by the side of the road in the horrible shape she was in, reached out and grabbed my hand and said, ‘I know you didn't mean for this to happen. We are going to get through this.’ To this day, I still don't know how she found enough strength to be able to do that.”

A rescue team had to cut Zody out of his car. He and Jessica were airlifted to a hospital in Boise. Emergency responders managed to stabilize Zody on the flight. Jessica, however, needed life support. She succumbed to her injuries the next day.

“When they told me that she had died, it didn't really register at first,” Zody said. “That's not something you can accept and move on from quickly.”

wouldn't risk driving fatigued during the near hour-long trip.

Zody said he and Weir had been close nearly from the first day they met.

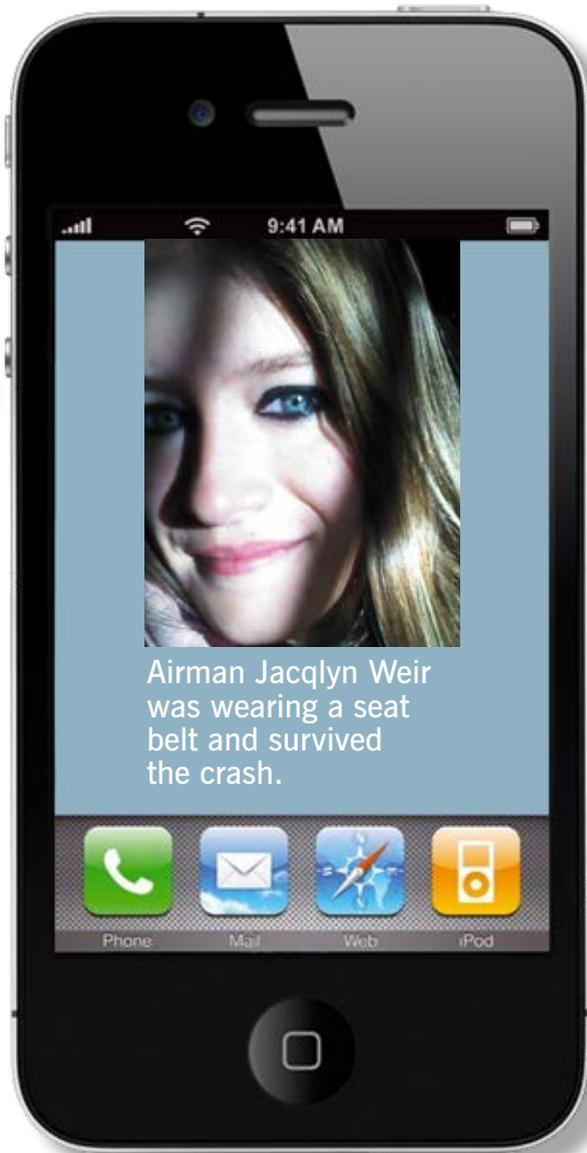
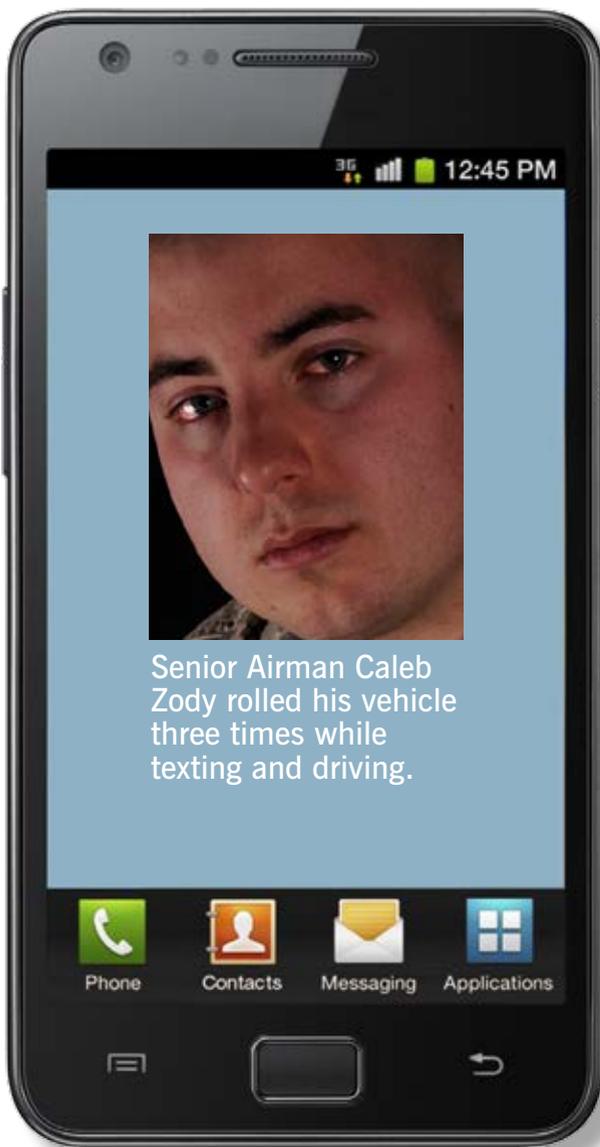
“She was a loner, and we just hit it off,” he said.

So offering to lend a hand just came naturally.

The trip to the airport went off without a hitch. On the way back as they neared the base, though, things unraveled quickly.

Zody said he was traveling at nearly 80 mph when he lost control of his vehicle.

“Within the last week, I had gotten a new cell phone with a full keyboard,” Zody recalls. “I felt that I was behind the times and needed to upgrade.”



“Jessica’s family has to live the rest of their lives with this,” he said. “I took their daughter; I took [Jacqlyn’s] sister. Because of my decisions, she’s not here.”

Zody remained in the hospital for two days. He had 4 inches of muscle stitched together and sewn back into his arm and multiple stitches and staples put into his head. He learned after the accident that the medics on the scene had given him a 15 percent chance to live.

As his physical injuries healed, his mental wounds grew deeper. He suffered from depression and struggled with the consequences of his actions.

Through the support of his family and friends, Zody slowly got better in the months after the accident. He attributes his faith in God as the one constant that got him through the toughest times.

“Without faith, I wouldn’t have survived,” he said.

In December 2009, Zody was charged with misdemeanor vehicular manslaughter. But because Jacqlyn testified that she had grabbed the steering wheel, Zody was spared a long jail sentence.

He accepted a plea bargain of reckless driving and was sentenced to five days in jail and 150 hours of community service.

Zody fulfilled his community service by speaking to groups about his accident and the dangers of texting and driving. His first briefing was in front of his leadership and peers at a 366th Aircraft Maintenance Group commander’s call.

“It was my most difficult briefing because I knew everyone in the audience,” he said. “Everyone knew me ... and everyone knew Jacqlyn.”

Even though he has completed his community service commitment, Zody plans to keep speaking out about the accident. He believes the more people who hear his story, the greater the chances are that lives won’t be lost to texting and driving.

“I hope everyone who hears my story will think about it next time they get behind the wheel,” he said. “I don’t want anyone else to go through what I’ve gone through. More importantly, I don’t want anyone to go through what Jessica’s family has gone through.”

**“I don’t want anyone else to go through what I’ve gone through. More importantly, I don’t want anyone to go through what Jessica’s family has gone through.”**



Changing the mindset of those who text and drive will not be an easy feat, considering the National Safety Council's statistic that texting and driving has been linked to more than 100,000 vehicle crashes each year. According to a study by *Car and Driver* magazine, sending or receiving a text takes a driver's eyes from the road for nearly five seconds; and while traveling 55 mph, this can equate to driving the length of an entire football field with your eyes closed.

"There's a reason the safety community is calling texting and driving the new drunk driving ... it's a nationwide concern," said Dave Etrheim, Air Education and Training Command Ground Safety Division. "One of the most dangerous things a person can do is drive ... and that's in the best of circumstances. Why would you add to the danger by creating a distraction so severe it's like wearing a blindfold?"

Zody learned this lesson the hard way.

"When we get behind the wheel of a car, we automatically take responsibility for the lives and safety of our passengers," he said. "That means no distractions, no multi-tasking. If we choose to put ourselves before the safety of others, we fail. There is no excuse for treating life so casually."✦

Sergeant Anschutz is with Air Education and Training Command Public Affairs at Joint Base San Antonio-Randolph, Texas.

## STOP THE TEXTS; STOP THE WRECKS

Five seconds is the average time your eyes are off the road while texting. When traveling at 55 mph, that's enough time to cover the length of a football field.

A texting driver is 23 times more likely to get into a crash. 😞

Of those killed in distracted driving related crashes, 18 percent involved reports of a cell phone as a distraction.

Using a cell phone while driving, whether it's handheld or hands-free, delays a driver's reactions as much as having a blood alcohol concentration at the legal limit of .08 percent.

Texting while driving contributes to more than 100,000 accidents per year on average. 😞

Seventy-seven percent of young adults are "very" or "somewhat" confident that they can safely text while driving.

Forty-eight percent of young drivers have seen their parents driving while talking on a cell phone, and 15 percent have seen their parents text while driving.

One in five drivers of all ages confess to surfing the Web while driving.

Texting while driving is about six times more likely to cause an accident than driving intoxicated. 😞

— National Highway  
Traffic Safety Administration and  
National Safety Council

# FOUR-FINGER DISCOUNT?

Preventable mishaps 'stealing' digits  
at record clip in FY 2013

By **TIM BARELA**

*Illustration by Tech. Sgt.*

**SAMUEL BENDET**

*and* **DAVID M. STACK**

**Table saws** are the most common way Airmen lose fingers, accounting for nearly one-third of the Air Force's 94 finger amputations this past decade, according to Air Force Safety Center statistics.



Air Force workers have been losing fingers at a clip that hasn't been seen in the past decade.

In less than a three-month timespan, from Oct. 15 to Jan. 7, Airmen have severed a thumb, two index fingers, two middle fingers, a ring finger and a pinky.

"If we kept up a pace like that, we'd end up with about 28 lost digits by the end of the fiscal year," said Robbie Bogard, Air Education and Training Command Ground Safety Division. "That's nearly double anything we've seen in the past 10 years."

The manner in which Airmen have amputated their appendages has been varied.

"We have managed to find seven different ways to lose a finger this year," Bogard said. "From table saws and winches, to doors and motorcycles, we've been seeing a bit of everything."

That's not to say the mishaps don't have a common theme.

"In virtually every case, the amputation happened after someone let their guard down and maybe had a lapse in attention, got complacent and ignored some basic safety rules," Bogard said.

He added that the scariest part is "we are just entering the time of year when activities begin to pick up as the weather warms and people start doing their spring cleaning."

Table saws have accounted for nearly a third of the 94 severed fingers Air Force members have suffered during the past decade, according to Air Force Safety Center accident data.

Why?

"Anybody can go to Lowes or Home Depot and pick up a table saw," Bogard said. "They might even get 'man points' with their friends and neighbors, a la Tim 'the Tool Man' Taylor. But previous mishap investigations show a lot of people don't sit down and read the owner's manual. As a result, they don't adjust the safety guard to work as designed. Instead, they get frustrated when the guard gets in their way and simply remove it. It's not hard to connect the dots after that."

Bogard said table saws are one thing, but people tend to lose fingers doing normal everyday tasks, such as closing windows and doors, mowing lawns, shredding paper or snagging wedding rings while falling from ladders, to name a few.

"As we enter the spring and summer months, people need to ensure they don't get too complacent," he said. "They also need to read and pay heed to the cautions and warnings on the equipment they use — they are designed to help you keep all your fingers."✈

## Trending up gets THUMBS DOWN when it comes to SEVERING FINGERS

Here are synopses of the seven Air Force mishaps that ended up in lost digits from Oct. 15 to Jan. 7 this fiscal year. Three of the seven happened in Air Education and Training Command.

**1. Oct. 15:** A 52-year-old civilian amputated his left ring finger while attempting to open a manhole cover with an unauthorized tool. The 200-pound cover fell on his hand.

**2. Nov. 8:** A 22-year-old airman first class severed his left index finger when he got it pinched between pieces of metal while disassembling an aircraft maintenance stand.

**3. Nov. 16:** A 28-year-old staff sergeant was riding a motorcycle when he rear-ended another motorcyclist who had to slam on his brakes after being cut off by another vehicle. The sergeant was ejected from the bike, severing two-thirds of his right thumb as he skidded along the asphalt. (AETC)

**4. Dec. 19:** A 26-year-old first lieutenant lacerated his right middle finger on the unguarded blade of a table saw. Doctor's later had to surgically amputate the damaged digit. (AETC)

**5. Dec. 21:** A 19-year-old airman first class crushed and severed his left middle fingertip while moving a large pallet on a non-Department of Defense aircraft.

**6. Dec. 27:** While trying to align a door that was binding, a 51-year-old civilian caught his left pinky finger between the door and wall, severing his fingertip.

**7. Jan 7:** A 24-year-old staff sergeant caught his right index finger in a vehicle winch, amputating the digit above the second knuckle. (AETC)







By **TIM BARELA**  
Photos by Tech. Sgt. **SAMUEL BENDET**

Long before the release of the hit song by Alicia Keys and the Hunger Games movie that further popularized the phrase, Staff Sgt. Erica Luke was the 'Girl on Fire' ... literally

**S**taff Sgt. Erica Luke always wondered how well fire-retardant flight suits really work. Six years ago she found out the hard way ... engulfed in flames.

Stationed at Andrews Air Force Base, Md., at the time, the 31-year-old aerospace and operational physiology technician had been temporarily assigned to a two-week, high-altitude airdrop mission to support the Navy explosive ordinance disposal

team at Little Creek in Suffolk, Va.

"Our main job was to fill the jump team's oxygen consoles prior to them going up to 25,000 feet," Luke said. She added that the jumpers needed to pre-breathe the extra oxygen for 30 minutes before going to that altitude and bailing out of the plane into the thin air.

On the last day, March 26, 2007, on the final mission, Murphy's Law threw her a red hot curve ball.

It was Luke's turn to fill up the consoles for the 11 jumpers.

The console charging port was located on the outside of the Cessna, and Luke's team replenished them when the aircraft still sat on the ground. To fill the consoles, they used cylinder-shaped oxygen tanks, which were roughly as tall as Luke's 5-foot-2 frame. To reach the valves on these tanks, she had to use a small stepladder. She ascended the ladder, filled the console and started turning off the oxygen bottle. Suddenly, violent vibrations began rumbling through the system.

"I heard a quick hiss like the air hose coming off a just-filled car tire, and then this loud bang like someone had popped a huge balloon directly against my left ear," Luke said.

Instinctively, she turned and closed her eyes as a burst of flame propelled by 1,100 pounds of pressure enveloped her in a fiery cocoon.

She felt the forceful gust of air from the flash fire but did not feel any heat or pain. And even though her eyes were closed, she could see a greenish hue.

"As I twisted away from the explosion, I jumped off the ladder," she said.

Then she headed directly for the designated emergency area, as people scrambled away from the aircraft to the pre-briefed safety zone. But at this point, she still wasn't worried about any injuries she might have sustained.

"Initially, I was embarrassed," Luke said. "I thought I had done something wrong. And because of the initial shock, I had no idea of the severity of the accident."

Then she noticed that half her flight suit had been scorched and, for the first time, realized she had been injured.

A medic rushed over to assess Luke's condition. One look at her scorched frame and he knew she needed to be medevac'd out of the area and stat!

An ambulance arrived only moments after the fire. Luke said she started out calm and collected, but she could see the worried



**Still holding onto her scorched flight suit,**

Staff Sgt. Erica Luke said she was "beyond happy" that it worked as advertised. She said she had always been taught that a flight suit was fire-retardant up to 700 to 800 degrees. But she admitted she was surprised that it was able to deflect most of the flash fire that enveloped her. She now stores the charred flight suit in a shadow box ... protecting it as it once protected her.

expressions on everyone who looked at her, which left her a little unsettled.

“Then the shock began wearing off,” she said, raising her eyebrows and slowly exhaling.

As she started to feel the full effects of those painful burns, paramedics placed her in the ambulance. She looked up at one of them and asked, “Are any jumpers around?”

When the medic replied, no, she said, “Alright, then I’m going to cry like a baby now.”

And she started bawling.

Paramedics stuck an IV in her and placed an oxygen mask over her face. The mask caused more agony, as it touched the tender side of her mouth that had been burned.

Moments later a helicopter arrived to whisk her away to an emergency burn center in Norfolk, Va., where a trauma unit stood by.

“They put me under, which was a good thing, because they scrubbed me down to get rid of all the bad skin . . . I didn’t want to be awake for that,” she said. “Then they placed a new type of scab-like adhesive over my wounds.”

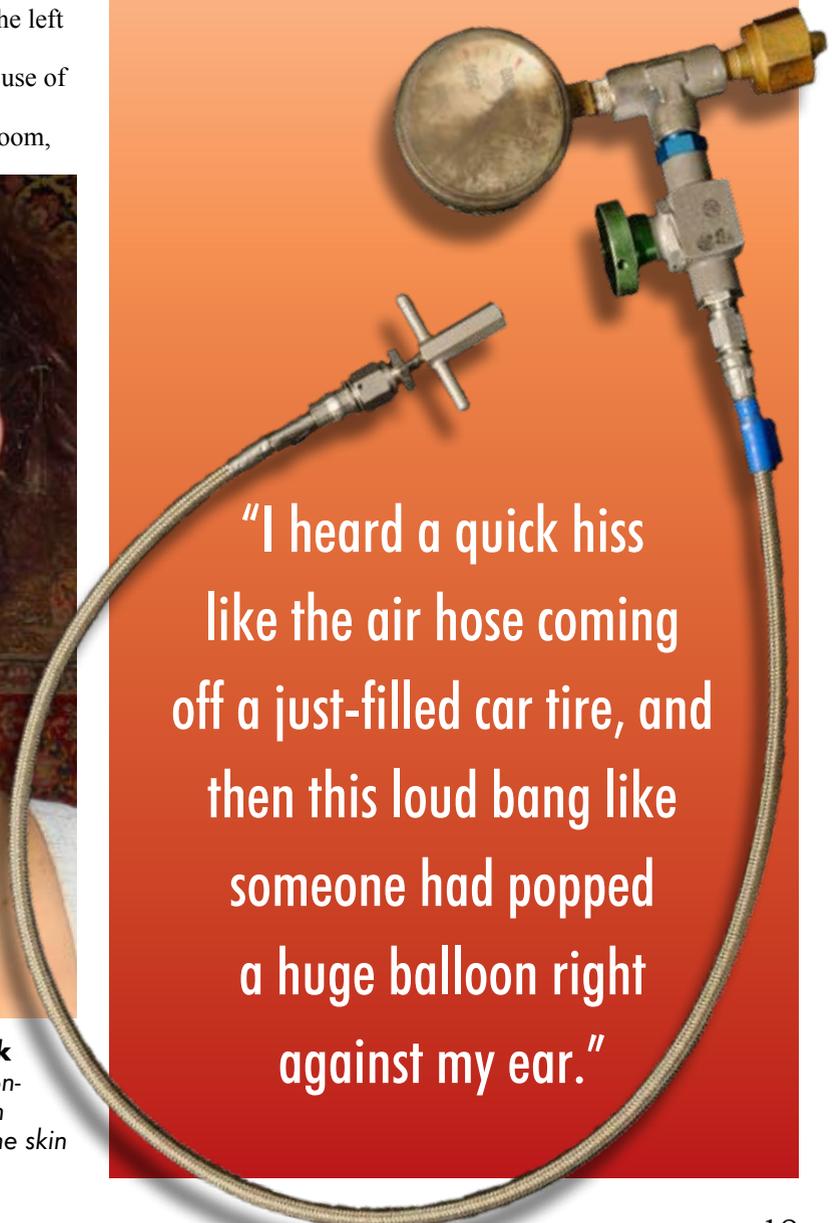
Luke had taken the blast to her left side. The worst burns were to her torso just above her armpit, where she said she still conceals a “really big scar.” Then the left and front of her neck endured second-degree burns, as well as her left ear and left side of her face. Her left arm and both hands also suffered second-degree burns. Her left eyebrow and much of her hair on the left side of her head had been singed.

Luke said the worst part afterward was not having the use of her hands, which had to be heavily bandaged.

“I couldn’t do the simple things — like using the restroom,



**When rust particles in a valve caused a spark that ignited a flash fire in a 100 percent oxygen environment, Luke didn’t escape unscathed. This picture, taken shortly after the mishap, shows where the fire melted the skin on her face and neck.**



“I heard a quick hiss like the air hose coming off a just-filled car tire, and then this loud bang like someone had popped a huge balloon right against my ear.”



**Luke proved to be resilient** despite her agonizing burns. She suffered second-degree burns to her torso just above the left armpit, the left and front of her neck, the left side of her face and ear, as well as to her left arm and both hands.

**“I couldn’t do the simple things — like using the restroom, taking a shower or cooking — on my own. ... If I had been wearing all my personal protective gear, my injuries most likely would have been minimal.”**



taking a shower or cooking — on my own,” she said.

But a Navy corpsman, Jennifer Detlefsen, whom Luke deemed “her angel,” took the Airman in for a week and helped with all the essentials, including cleaning the pus oozing from her skin while Luke sat there in agony. Luke finished her month-long rehab at George Washington Hospital’s burn and trauma unit in Washington D.C.

Her recovery allowed her time to think about what might have caused the accident and if she were at fault. An accident investigation later revealed that rust particles had formed in the charging port valve. Friction on the contaminants caused a spark that ignited the highly flammable oxygen.

While that meant she didn’t cause the mishap, Luke still admitted she could have done some things that probably would have reduced the severity of her injuries.

“I should have been wearing flight gloves,” said Luke, who is now the executive assistant for the 7th Bomb Wing command chief at Dyess AFB, Texas. “It’s also recommended that you wear a flight jacket and face shield when working with the oxygen tanks. If I had been wearing all my personal protective gear, my injuries most likely would have been minimal. Additionally, you should ensure the collar is up and your sleeves are rolled down on your flight suit for more protection.”

As bad as things were, though, they could have been much worse.

“The doctor showed me how damaged my flight suit was,” Luke said. “Then he pointed out how lucky I was to be wearing one. He said if I had not been wearing my flight suit, I would have had even more damage to my face — to the point of needing surgery. But the sleeve

of my flight suit had partially covered the blast when I instinctively threw up my arm in a defensive posture.

“You hear it — and even teach it — all the time: ‘The flight suit is fire retardant at 700 to 800 degrees.’ But until something actually happens where you need it to work as advertised, it probably really doesn’t sink in how important the flight suit is. After the mishap, I was like, ‘Wow!’ It saved my life.” ❖



**Two months after the March 2007 accident,** Luke met her future husband, Staff Sgt. Alexander Luke. They now have two daughters, Riley, 4, and Mya, 3, who once saw one of her mommy’s scars, pointed and asked, “Boo-boo hurt?”

## Don’t Get Burned

Even though the flash fire mishap wasn’t her fault, Staff Sgt. Erica Luke admitted she could have done some things better in regard to proper wear of her protective equipment to help limit her injuries.

“I’m more cautious now,” she said. “It’s ‘the snake that bit you,’ so I don’t cut any corners anymore.” Here are some tips she recommends adhering to when working with combustible products:

1. Wear gloves.
2. Wear fire-retardant clothing and jacket.
3. Keep your sleeves fastened down and collars up.
4. Wear a face shield.
5. Take off wedding bands.
6. Wear cotton undershirts.
7. Follow technical orders to a T.

# WHAT'S UP **DOC?**

## F-22 PILOT-PHYSICIAN TAKES SAFETY TO NEW HEIGHTS

By Staff Sgt. **KRISTEN WICKER**

Photo by Master Sgt. **JEREMY T. LOCK**



**A F-22A Raptor** (foreground) from the 43rd Fighter Squadron at Tyndall AFB, Fla., and a F-35A Lightning II joint strike fighter from the 33rd Fighter Wing at Eglin AFB, Fla., soar over the Emerald Coast Sept. 19, the first time the two fifth-generation fighters have flown together for the Air Force.

Powerful thrust, paired with unparalleled agility, propels the gray fighter jet through the sky in ways unfathomable to earlier generations of pilots.

The complex system of technology that makes up the F-22 Raptor exposes the human body to altitudes and G-forces rarely experienced by other fighter pilots.

The medical community's first-hand knowledge of these unique conditions, however, is limited by the fact that flight surgeons can't accompany a pilot in the single-seat F-22. While a doctor can't ride tandem in the Raptor, the Air Force can put qualified physicians in the driver's seat under the Pilot-Physician Program.

Lt. Col. (Dr.) Jay "Bones" Flottmann, a former flight surgeon and now fully qualified F-22 pilot and 325th Fighter Wing chief of flight safety at Tyndall Air Force Base, Fla., took on the challenge and is helping the fighter community ensure the safety of the F-22s.

Flottmann is one of 11 pilot-physicians in the Air Force, making him a member of an exclusive band of knowledgeable experts who are becoming more valuable as new technology offers new tasks for

the human body. This proved especially important considering the early physiological effects on pilots in the F-22.

While some have come before him in various other aircraft, Flottmann is the first pilot-physician to tackle the Raptor. However, his journey began with a calling for medicine.

"Once I graduated medical school, I was commissioned as a captain in the medical corps and was assigned to Keesler Air Force Base, Mississippi, to begin post-graduate training," Flottmann said. "While at Keesler, I decided that I wanted to be a flight surgeon, not knowing what that was."

The doctor went to Brooks AFB, Texas, to attend the Aerospace Medicine Primary Course. There, he and some classmates received an orientation flight in a T-37 Tweet, a small economical twin-engine jet trainer.

"Prior to that time, I couldn't tell you what a T-37 was from a T-38 (Talon), and I couldn't really tell you what any airplane in the Air Force inventory looked or sounded like," Flottmann said.

After that ride, he was hooked.

## A Long Way to the Cockpit

"I could not believe that people get paid to fly airplanes," he said. "It was the most fun thing I had done, and I was amazed at how awesome the experience was."

Flottmann began asking whether there was a program that would allow him to become both a pilot and a doctor. While pilots have been known to attend medical school, there didn't seem to be an established way for an Air Force doctor to attend pilot training.

Meanwhile, Flottmann was selected to be the flight surgeon for the Thunderbirds, the U.S. Air Force Air Demonstration Squadron at Nellis AFB, Nev. Near the end of the tour with the Thunderbirds, Flottmann learned about a flight surgeon in Alaska who had successfully entered the pilot program.

"So here's a guy who cracked the nut," Flottmann said. "Now that it had been done, I told my commander at that time I wanted to do the exact same thing, and he helped me put together an application for pilot training."

Flottmann was accepted into the program himself and went to Moody AFB, Ga., to begin pilot training in the T-6 Texan. At the end of his training, he was the only student in his graduating class to be awarded a slot for the F-15C Eagle, his first choice. Despite this success, Flottmann began putting together an application to be considered for the official pilot-physician specialty code.

"While I was at Laughlin AFB, Texas, I finished the application process and started working an exception to policy to go back to the medical corps in the Air Force specialty code pilot-physician career rating, because the medical corps owns that duty code and it required a competitive category transfer," he said. "My AFSC was changed, and that's about the same time that the F-22 began to experience a rash of physiological problems."

## Fixing the F-22

In 2009, wing leaders realized they needed somebody with medical and operational flying knowledge to assist with the problems of the new jet. The program director of the Pilot-Physician Program recommended Flottmann for the job.

"Many people didn't know about this program or this job, and many still don't know about it," Flottmann said. "When I first arrived at Tyndall as part of the F-22 program, most weren't even sure what to do with someone like me. So, I deployed for six months. When I came back in November 2010, that's when I began to train in the F-22."

In May 2011, a stand-down temporarily grounded the F-22 because of the Raptor's technical difficulties. With the jets off the flight line, the pilot-physician became busier than ever before.

"I became heavily involved in the safety investigations," Flottmann said. "I was brought on board as a pilot and medical

**"We found verifiable and tangible issues. ... Some things I even experienced myself while flying the F-22, and I did the research to discover what was going on physiologically."**

member, and we started a comprehensive and thorough, deep-dive investigation."

His team conducted exhaustive interviews and performed extensive research — looking to understand what, at the time, were unexplained physiological incidents.

As a result, Flottmann's team advised senior Air Force leaders on how to study the incidents and mitigate risks. They also helped keep current information on the investigation flowing to the F-22 community, U.S. Navy and NASA researchers who partnered with the Air Force and interested members of Congress, as well as members of the media.

"We introduced the idea of flying with a pulseoximeter and incorporating it into the helmet — something unique to the F-22," the colonel explained. "No other aircraft has that feature. We developed an incident response protocol and identified a problem with the upper pressure garment, which was functioning differently in an F-22."

Trained as a pilot and as a qualified medical professional, Flottmann was able to evaluate the occupational medical environment, studying the human factors involved with piloting the multi-million dollar airframe.

"We found verifiable and tangible issues, and we addressed them," Flottmann said. "Some things I even experienced myself while flying the F-22, and I did the research to discover what was going on physiologically."

## Looking to the Future

The fighter community continues to become more technologically advanced and more capable. The need for speed and height, meanwhile, has pushed the envelope of technology and pilots' physical limitations.

"Man has introduced some [new] variables on human physiology, and we are more thoroughly examining the effects of those variables and seeking to alleviate them while maintaining the high-performance of the fighter itself," Flottmann said.

Flottmann thrives in the pilot's seat and his success is reflected in the restructured Air Force Instruction 11-405, which allows qualified flight surgeons to apply to pilot training. Capt. William Smith, from the 325th Medical Group, was recently selected as the first flight surgeon to attend pilot training through this official channel, following Flottmann's footsteps.

"Right here at Tyndall we are engaged and active in growing the program, so getting people like Captain Smith in the program is important for its viability," Flottmann said.

"We are thrilled for him and who knows if he will come back to fly the F-22 like I do — the sky's the limit."



COURTESY PHOTO

**Lt. Col. (Dr.) Jay Flottmann**, shown here with an F-15 Eagle, is a former flight surgeon who is now a fully qualified F-22 Raptor pilot and 325th Fighter Wing chief of flight safety. He is the first pilot-physician to fly the F-22.

Sergeant Wicker is with the 325th Fighter Wing Public Affairs at Tyndall Air Force Base, Fla. (AFNS)



BY MASTER SGT. JEFFREY ALLEN

## DISTRESS CALL

### AIR FORCE TRAINER PILOT PROVIDES CRITICAL SUPPORT AS CIVILIAN AIRCRAFT GOES DOWN

LAUGHLIN AIR FORCE BASE, Texas (AETCNS) — During a two-aircraft formation flight Dec. 5, a T-6A Texan II instructor pilot with the 85th Flying Training Squadron here demonstrated poise and composure when faced with a situation he had yet to come across in his career.

Capt. James Kareis was flying back from Fort Worth Alliance Airport when he heard distress calls from an aircraft experiencing engine malfunctions.

"I turned my radio to an emergency frequency used by civilian aircraft to hear the transmissions better," Kareis said.

The distress calls came from call sign 2252 Juliet who explained his situation to Kareis. His engine was failing, and he was looking to land in a nearby field.

While in contact with the aircraft, Kareis, a Pittsburgh native, maintained constant communication with air traffic controllers in Houston who were in touch with the distressed aircraft before losing communication.

"I was constantly letting the gentleman know we were here, and we were going to help anyway we could with the situation," Kareis said. "He updated me with his coordinates frequently, and I passed them directly to Houston so they always had an idea where he was."

After 20 minutes of communicating back-and-forth, the distressed aircraft's engine failed, but the pilot managed to land safely in a field unscathed.

Kareis, a graduate of Embry Riddle Aeronautical University, passed along the final coordinates so emergency personnel could

respond to the downed aircraft as soon as possible. "Fortunately for this gentleman we just so happened to be in the right place at the right time," he said. "I guess you could say preparation met opportunity in this case."

While the entire ordeal lasted less than 30 minutes, the scenario was unlike any other he had faced to this point.

"We brief about scenarios like this before every flight, but it is very uncommon for it to happen like it did," Kareis said. "I am just glad everything happened the way it did, and he was able to have peace of mind knowing we were there to help him."

— Senior Airman Scott Saldukas  
47th Flying Training Wing Public Affairs



BY SENIOR AIRMAN SCOTT SALDUKAS

**During a routine return flight from Fort Worth Alliance Airport,** Capt. James Kareis, 85th Flying Training Squadron T-6A Texan II instructor pilot, heard distress calls from an aircraft experiencing engine malfunctions and acted as a liaison between the aircraft and air traffic controllers in Houston. Kareis helped to ensure responders had accurate coordinates of his location after landing in a field safely.

# FOR THE BIRDS

## FALCONS RUN OFF SMALLER BIRDS TO PROTECT BIGGER ONES

MCCONNELL AIR FORCE BASE, Kan. (AFNS) — It seems counterintuitive to think a 2-pound feathered bird can protect a metal one weighing nearly 300,000 pounds fully loaded, but that's exactly what's happening here.

The 22nd Air Refueling Wing bird aircraft strike hazard program is being overhauled with new contractors employing the use of a falcon to keep skies clear from avian adversaries that threaten the KC-135 Stratotanker.

The BASH program is put in place to reduce bird strikes by introducing a natural predator into the area to ward off smaller animals. McConnell is actually changing the type of predator used from a dog to a pair of falcons.

Elaina, a Barbary falcon, and Jack, a Peregrine-Prairie hybrid, will be McConnell's new solution, capable of providing smaller birds the motivation to move along.

"One strike, if the bird hits the wrong



COURTESY OF THE NATIONAL GEOGRAPHIC SOCIETY

**This peregrine falcon** is similar to one of the falcons that will be used for the McConnell AFB, Kan., bird aircraft strike hazard program.

spot on a plane, could do \$50 to \$100 thousand worth of damage," said Maj. Jeremy Fischman, 22nd ARW flight safety chief. "It is really easy for the program to pay for itself by preventing one bad bird strike."

There were 4,471 bird strikes Air Force-wide in 2011. These incidents cost \$13,061,140.

While the fields and ponds surrounding McConnell are inviting habitats for birds, the falcons will be introduced as a predatory species. The birds instinctively know that it is too dangerous to seek food and shelter once they note the presence of the falcons.

Preventing bird strikes also maintains safety by not putting Airmen in a situation where they have to maneuver aircraft damaged in flight.

Having falcons will help disperse the birds, and hopefully, there will be less of a bird strike concern for the KC-135s.

— Airman 1st Class Jose L. Leon  
22nd Air Refueling Wing Public Affairs

# SPATIAL DISORIENTATION LEADS TO F-15E CRASH, DEATH OF PILOT

An accident investigation board determined the March 28, 2012, crash of an F-15E Strike Eagle deployed to Southwest Asia happened because the pilot, who was fatally injured during the mishap, became spatially disoriented on the nighttime mission, according to a recently released report.

The board president found clear and convincing evidence that the pilot became spatially disoriented because of a visual illusion during his nighttime recovery to the deployed operating location. The weapons systems officer ejected safely with only minor injuries. The pilot, however, was killed when his ejection sequence was interrupted by contact with a 377-foot tower that was part of a large radio tower array, the accident report said. The aircraft was destroyed after contacting the radio tower and subsequently the ground, with losses valued at more than \$47 million. The aircraft also caused damage to host nation property.

According to the report, the aircraft, assigned to the 391st Expeditionary Fighter Squadron, impacted the ground approximately 18 nautical miles west, southwest of its deployed operating location. The mishap



**An F-15E Strike Eagle struck a radio tower** after the pilot became spatially disoriented on a nighttime mission at a deployed location in Southwest Asia, according to accident investigators. The pilot was killed, while the weapons systems officer successfully ejected and suffered only minor injuries.

crew was participating in a large force exercise as the flight lead of a two-ship of F-15Es in a strike package of 27 aircraft. At the conclusion of the tactical portion of the mission, the mishap crew removed their night vision goggles and proceeded back to the base.

Blowing dust and sand obscured the horizon. Because of the reduced visibility and the lack of a discernible horizon, the pilot incorrectly interpreted the visual scene in front of him and began a series of abrupt maneuvers that ultimately resulted in him rolling the aircraft into an inverted attitude 1,800 feet above ground level and 25 degrees nose low. The weapons systems officer became convinced the pilot had become disoriented and took control of the aircraft. After attempting to recover the aircraft, the WSO initiated ejection for the crew.

In addition to the spatial disorientation, investigators found the lack of an effective instrument crosscheck by the pilot and a combination of the environmental and procedural factors present on the approach to the base substantially contributed to the mishap, the report said.

— Tim Barela

BY AIRMAN 1ST CLASS JAMES RICHARDSON