

Winter Edition 2016

Combat Edge



ACC's Full-Spectrum Safety Magazine



Flight

Safety

Through The

DECADES

PAGE 8

Of Course It Ain't A Problem ...

Until It Is A Problem!

Wear your protective gear properly!



Combat Edge

4 | C2 COMMAND AND CONTROL
by Master Sgt. David M. Markin
509 BW/SE, Whiteman AFB, Mo.

8 | FLIGHT SAFETY THROUGH THE DECADES
by HQ ACC Safety
Joint Base Langley-Eustis, Va.

14 | FUNDAMENTALS FOCUS

16 | MAINTENANCE MINUTE

17 | WEAPONS WORDS

18 | MONTHLY AWARDS

19 | QUARTERLY AWARDS

20 | ASAP

21 | STATS

GENERAL HERBERT J. CARLISLE
COMMANDER

COLONEL LAWRENCE A. NIXON
DIRECTOR OF SAFETY

MRS. BARBARA J. TAYLOR
EDITOR

MR. KURT REILLY
ART DIRECTOR

Volume 24 Issue 3, ACC SP 91-1

THE COMBAT EDGE

(ISSN 1063-8970) IS PUBLISHED QUARTERLY, BY AIR COMBAT COMMAND, HQ ACC/SEM, 220 SWEENEY BLVD (BLDG 669, RM 203), JOINT BASE LANGLEY-EUSTIS, VA 23665-2714. PERIODICAL POSTAGE PAID AT HAMPTON, VA 23670 AND ADDITIONAL MAILING OFFICES. POSTMASTER: SEND ADDRESS CHANGES TO HQ ACC/SEM, 220 SWEENEY BLVD, BLDG 669, RM 203, JOINT BASE LANGLEY-EUSTIS, VA 23665-2714.

DISTRIBUTION: E OPR: HQ ACC/SEM. DISTRIBUTION IS BASED ON A RATIO OF ONE COPY PER 10 PERSONS ASSIGNED. AIR FORCE UNITS SHOULD CONTACT THE COMBAT EDGE STAFF TO ESTABLISH OR CHANGE REQUIREMENTS.

ANNUAL SUBSCRIPTIONS: AVAILABLE TO NON-DOD READERS FOR \$51.00 (\$71.40 OUTSIDE THE U.S.) FROM THE SUPERINTENDENT OF DOCUMENTS, PO BOX 371954, PITTSBURGH PA 15250-7954. ALL SUBSCRIPTION SERVICE CORRESPONDENCE SHOULD BE DIRECTED TO THE SUPERINTENDENT, NOT HQ ACC/SEM.

CONTRIBUTIONS: PLEASE SEND ARTICLES WITH NAME, RANK, DSN PHONE NUMBER, E-MAIL, COMPLETE MAILING ADDRESS AND COMMENTS TO ACC/SEM COMBAT EDGE MAGAZINE.

ACC.THECOMBATEDGE@US.AF.MIL

TELEPHONE: (757) 225-7941

DSN: 575-7941

FAX: (757) 764-8975

THE EDITORS RESERVE THE RIGHT TO EDIT ALL MANUSCRIPTS FOR READABILITY AND GOOD TASTE.

DISCLAIMER: THIS MAGAZINE IS AN AUTHORIZED PUBLICATION FOR MEMBERS OF THE DOD. CONTENTS OF THE COMBAT EDGE ARE NOT NECESSARILY THE OFFICIAL VIEWS OF, OR ENDORSED BY, THE UNITED STATES GOVERNMENT, THE DOD, OR THE UNITED STATES AIR FORCE. INFORMATION CONTAINED IN ANY ARTICLE MAY NOT BE CONSTRUED AS INCRIMINATING UNDER ARTICLE 31, UCMJ.

COVER PHOTO IS AN ILLUSTRATION.

THE COMBAT EDGE WILL RETURN THIS SPRING

ACCent



Col. Lawrence A. Nixon
Director of Safety

It's Fundamental

Let's call it the "dirty little secret" of many mishaps. We live in a world in which we interact with complex machinery and systems everyday both at work and in our personal time. With this mind, many of you probably assume most of our safety-related incidents are caused by a complex interaction of issues which result in a bad outcome. While this can certainly be the case in some situations, we've seen a recent trend in many of our mishaps where a bad decision or complacency during a seemingly routine, fundamental task leads to a catastrophic turn of events. Especially in aviation, where many of you are executing some of the most advanced tactics in the world, the routine/administrative portion of the mission has been where we've seen many mishaps occur, not during the complex, tactical execution phases of flight. This demonstrates we are keeping a good focus during the high intensity portions of our activities but may be lessening our vigilance when we believe we are in a less demanding phase.

However, as we've discussed before, your car, aircraft, body, etc. doesn't really care what phase of an activity or mission you are in. It will react to whatever inputs and direction it is given. If this results in a bad situation, it doesn't know or care that it is supposed to be a low-threat, routine task where these things don't happen. A good analogy is a race car driver performing highly-skilled maneuvering for several laps and then crashing into the wall near the pit crew due to not focusing on the routine task at hand. While everyone has these routine tasks both at home and at work, never let "routine" equal "not important—no threat."

The point is you need to ensure you are keeping your focus on every aspect of any activity and not stopping this focus until you are done. It ain't over until it's over are good words to always keep in mind when performing any activity—and no matter how complex your tasks, remember the fundamentals are always there and important. Have a great winter season and thanks for all that you do every day.

C2

Command and Control

BY MASTER SGT. DAVID M. MARKIN

During this past August, the Air Force Safety Center's focus was Command and Control (C2) Systems Aircrew Operations safety.

As a prior C2 Battle Management Weapons director, I have more than 15 years of experience in the C2 realm. There were numerous times while controlling the skies over Iraq or Afghanistan, situations could have turned south quickly. I remember one incident in particular; while deployed to Balad Air Base in 2006—I had “tunnel vision” from being over tasked. I learned a lesson in resource management that day.

The conditions were set that could have easily cost the lives of both Marine and Air Force pilots. At that time, there was only one controller on scope talking to the aircraft and another controller, called an “assist,” working with Air Traffic Control via computer chat.

Here was the situation ...

I had roughly 40 aircraft under my control, many of which were in a Combat Air Patrol over the Baghdad area ...





There was a flight of F-15E Strike Eagles requesting a transit for a tasking from a CAP around Baghdad to the south; a flight of F-16 Fighting Falcons requesting a tanker point-out; a flight of F-18s established in a CAP just south of Baghdad; a remotely piloted aircraft flying around doing nothing but getting in the way (at least that is what it appeared to me) and had no radio contact with me; and ATC was trying to launch and recover civilian air traffic out of Baghdad. In addition, my senior director (SD) was busy coordinating an issue with the Air and Space Operations Center.

I was busy and quickly losing my situational awareness due to over saturation with the mission. The F-15Es were leaving their orbit so I gave them a transit altitude that I thought was safe at the time. My next task was to give the F-16s a point out to the tanker and get them out of the way of maneuvering aircraft.

Just after giving the tanker information to the F-16s, the F-18s requested a lower altitude from 18,000 feet to low level for a show of force. I quickly sanitized the immediate area and approved the drop in altitude and pushed them to a Joint Terminal Attack Controller frequency.

About that same time, my “assist” was telling me ATC wanted to take an aircraft off out of Baghdad. I quickly told them to hold on the runway until I could clear the airspace. The RPA then re-appeared on my scope after we lost radar contact with it about 10 minutes prior. Luckily, the F-18s already had awareness on the RPA from the JTAC.

At this time, I told my SD I needed help because other aircraft started to request movement from one area to the next, or to return to base. The SD told me he was busy and to handle it. No more than a minute

later, I get a call on the radio from the lead F-15E. The question was “Were you aware of the F-18s in the airspace, because they just crossed about 300 feet in front of my nose?”

At that moment it felt like time froze. I had given a transit to the fighters and forgot about them. I had no idea how to respond. The only thing I could think to say was “copy.” My response did not answer his question, but it was all I could think of at that moment. I was so focused on the F-18s and the RPA, I completely forgot about the transit instructions I gave just minutes before. None of the other people on my crew had caught the near-miss either. The F-15E pilots were able to avoid the F-18s through the rest of the transit, but the near miss was too close.

During the debrief with my crew, I discussed what happened and we learned a hard lesson—when



the voice on the radio asks for assistance, it becomes the priority. Not only was this incident a failure on my part, it was a failure on my crew as well.

I replayed that scenario in my head over and over again. I had many successes in my days as a weapons director, but that one day could have become a serious failure and would have cost more than anyone can repay; the life of a brother in arms.

What I learned from that scenario is to listen when someone asks for help. I also learned crew resource management is the key to the success of a mission. All of the pilots in the air are counting on us to make the right decision and make it quick.

Resource management can easily be translated into risk management. In this incident, both deliberate and real time risk management played a part. My crew had a plan and executed to the plan as much as possible,

but during war the plan can quickly change. We always need to be prepared to quickly assess the situation and make smart decisions in the heat of the moment.

Paying attention to what is going on around you, and keeping and maintaining your situational awareness high, can prevent a catastrophic mistake from happening. Have a safe plan, execute the plan, make time-critical adjustments as needed, and make sure everyone goes home safely at the end of the day. ✖



Flight Safety DECADES

Through The

Then

BY BRIG. GEN. TARLETON H. WATKINS

published in TAC Attack, July 1965 (predecessor to the Combat Edge)

SAFETY, a never out-of-date subject, has been battered around so much over the years that often comments such as these fall on deaf ears. Everything has been said that can be said—but we still have accidents. Basically, there are no new types of accidents—just repeats of accidents that everyone has been warned about with millions of words and pictures. So again, as in advertising, we have to repeat again and again in order to telegraph this important message of safety to our personnel.

SAFETY is knowing your job. The best guard against mishaps is an understanding of every facet of your job. A pilot in command of an intricate weapons system has no room to make mistakes. The slightest miscalculation of a routine job can lead to a serious accident. Our biggest safety hazard is the man who only half understands his job.

SAFETY is pride in your job. A proud approach to your job offers no room for carelessness and automatically protects against safety hazards. When morale and pride in workmanship is low, we are more liable to make mistakes; accidents begin to happen. A proud approach to a job is a safe approach.

SAFETY is not luck; it does not just happen. A safe environment is made to happen when people are aware of hazards which exist. You can't be safe when you aren't alert to hazards around you. Alert people are the backbone of sharp, well-run organizations. In regard to safety, there is no such thing as bad luck. Excellent safety records in an organization are the result of alert personnel who know their business and are keenly aware of their responsibilities. There is no place for luck in the business of preventing accidents.

General Watkins was stationed in Hawaii during the attack on Pearl Harbor in 1941, and he was one of the few pilots to get into the air during the attack. He was later assigned to the 79th Fighter Group in North Africa where he destroyed three enemy aircraft while flying P-40 aircraft. In 1965, General Watkins assumed command of the USAF Air Ground Operations School.



General Watkins on SAFETY

SAFETY, a never out-of-date subject, has been battered around so much over the years that often comments such as these fall on deaf ears. Everything has been said that can be said—but we still have accidents. Basically, there are no new types of accidents—just repeats of accidents that everyone has been warned about with millions of words and pictures. So again, as in advertising, we have to repeat again and again in order to telegraph this important message of safety to our personnel.

SAFETY is knowing your job. The best guard against mishaps is an understanding of every facet of your job. A pilot in command of an intricate weapons system has no room to make mistakes. The slightest miscalculation of a routine job can lead to a serious accident. Our biggest safety hazard is the man who only half understands his job.

SAFETY is pride in your job. A proud approach to your job offers no room for carelessness and automatically protects against safety hazards. When morale and pride in workmanship is low, we are more liable to make mistakes; accidents begin to happen. A proud approach to a job is a safe approach.

SAFETY is not luck; it does not just happen. A safe environment is made to happen when people are aware of hazards which exist. You can't be safe when you aren't alert to hazards around you. Alert people are the backbone of sharp, well-run organizations. In regard to safety, there is no such thing as bad luck. Excellent safety records in an organization are the result of alert personnel who know their business and are keenly aware of their responsibilities. There is no place for luck in the business of preventing accidents.

Brigadier General Tarleton H. Watkins enlisted in the Air Force in 1938 and attended pilot training at Randolph and Kelly Fields, graduating in May 1939. Stationed in Hawaii during the attack on Pearl Harbor, he was one of the few pilots to get into the air. He was later assigned to the 79th Fighter Group in North Africa where he destroyed three enemy aircraft while flying P-40 aircraft. He was awarded the Distinguished Flying Cross, Air Medal with seven oak leaf clusters, and the Presidential Unit Citation with one oak leaf cluster.

After the war he served a tour at Kinley AFB, and was then assigned to the 1602d Air Transport Wing in Germany in 1951. In 1952 he was appointed Commander of the 1708th Ferrying Wing (WATS) at Kelly AFB.

Following a tour at the National War College, General Watkins was assigned to the 322d Air Division in France and became Division Commander in June 1955. In this capacity he commanded the entire USAF airlift effort in the 1960 Congo Crisis. In 1961, he was assigned to the 1st Air Force, as the Deputy for Operations.

In January 1965, General Watkins organized the Directorate of Airlift at Hq TAC and served as the Director until 1966 when he assumed command of the USAF Air Ground Operations School at Hurler Field, Florida.



* F-16, F-15E and F-22 rates are Combat Air Forces (CAF) Class A mishap rates.

F-100

14.35 Class A mishaps per 100K flying hours in CY1965



F-101

8.75 Class A mishaps per 100K flying hours in CY1965



F-105

22.3 Class A mishaps per 100K flying hours in CY1965



TAC had
8.7 Class A
mishaps
per 100K
flying hours in
CY1965

in 2015
ACC aircraft
Class A
mishap rates
were down
more than

75%

compared
to TAC
rates
in 1965



ACC had
2.13 Class A
mishaps
per 100K
flying hours in
FY2015

F-16

3.07 Class A mishaps per 100K flying hours in FY2015



F-15E

3.56 Class A mishaps per 100K flying hours in FY2015



F-22

3.71 Class A mishaps per 100K flying hours in FY2015



* ACC rate reflects manned aircraft only



Now

Today, 50 years later, as stated by Brig Gen Watkins in 1965, safety is still not an out-of-date subject. What is evident in reviewing the mishap rates between 1965

and 2015 is the great progress our enterprise has accomplished in decreasing mishap rates and preserving our combat capability in both equipment and people. There is no one area responsible for this progress – it is a combination of individual professionalism, training, leadership, and material/design improvements. What is clear is the aviation mishap rate is drastically improved. The tenets stated in 1965 still ring true today – know your job, act professionally, and continue to utilize risk management to mitigate hazards in our endeavors.

As we advance aviation into new frontiers with Remotely Piloted Aircraft (RPA) and fifth-generation fighters, our command-level efforts to reduce mishaps continue with incorporating recommendations from safety investigations in our processes and equipment, such as the Auto Ground Collision Avoidance System (AGCAS) in the F-16, as well as implementing various proactive safety measures. However, individual efforts and professionalism, in the end, are the major keys to success in mishap prevention. Fifty years from now, in 2065, while the tenets of safety will remain the same, they hopefully will be examining the drastic aviation mishap rate reduction since 2015. **Fly Safe!** ✖



Where'd Who Go?

The mishap flight was scheduled as a 2v1 air combat maneuvers (ACM) training mission. The two-ship included an instructor and a student, and number three in the formation was to act as the adversary. During the incident engagement, the adversary was pointed at the formation from 15-20NM away, with the two-ship heading for the merge spread in tactical formation. The student pilot initially maneuvered as he became targeted by the adversary's radar, and then visually merged with the adversary aircraft. At the merge, the student pilot began a turn in the direction of his flight lead, but failed to use proper radio calls to ensure proper transfer of responsibility for deconfliction within the formation to the lead aircraft. To exacerbate the situation, the instructor misperceived the wingman as turning away from the instructor's current position. With the instructor focused on simulating a kill on the adversary, and the student pilot blind on the instructor aircraft while maneuvering against the same adversary, the two aircraft continued on their collision course and impacted. Fortunately, no one was killed, but the mishap resulted in losses to the Air Force of tens of millions of dollars.

Ground : 1 — Aircraft: 0

The mission was planned as a student RPA landing practice sortie. Approaching the normal perch point, the instructor directed the student to delay the turn to final, but begin the descent. As the instructor pilot focused on the student's ground track, he failed to notice an excessive sink rate developing. Degraded data signals exacerbated the instructor's channelized attention, and led to the RPA impacting terrain well short of the runway. Fortunately, no aircrew were injured during the crash; however, the Air Force lost a valuable combat asset.



Get the Balance Right

These two mishaps resulted in some "unplanned" lessons learned for both the student and instructor pilots. They also were both related to instructors losing the "big picture" while performing instruction. The Air Force IP Basic Course manual is fairly clear: "... never allow students to exceed your own abilities/comfort zone and never compromise safety for the sake of instruction." As you strap in for your next instructor sortie, ensure your teaching duties don't lower your SA to the point of risking overall mission safety.



Everyone should think risk management.



Check Three is a
tool that can help.
www.check3gps.com





A maintenance mishap usually involves a misplaced tool, improper maintenance procedures or technical data violations. It may end in a mishap, but where does the mishap begin? We need to peel back the layers to determine why there was a screwdriver left in an inlet, how the sniper pod fell off the pylon and why maintainers were performing maintenance without a technical order. When maintenance is the causal factor of an aircraft mishap, it indirectly comes down to one or a combination of the following factors:

1. Fatigue/Stress
2. Time pressure
3. Misperception of Hazards
4. Inadequate skills
5. Lack of Motivation

Lack of Leadership + Human factors = Aircraft Maintenance Mishap

Having spent 15 years as an aircraft maintainer, at one point or another, I have experienced all five of the factors mentioned. Being young, dumb and having a belief that you are invincible is a commonality shared between many 18 year olds, but it is a recipe for disaster. Luckily for me, I was surrounded by supervisors that were aware of my strengths/limitations. They took the time to get to know who I was as an individual, enabling them to notice changes in my attitude/work performance.

It is simple to place blame on the individual who was the direct cause of the aircraft mishap, but at the end of the day, it boils down to a lack of leadership/supervision. Couple human factors, with lacking leadership/supervision, then it's only a matter of time before your unit is hosting a site visit from a Safety Investigation Board. As a supervisor, the first step in eliminating maintenance mishaps is by stepping out from behind the desk and develop a relationship with the Airman that work for you. As long as there are human beings, there will always be human factors, but by becoming better leaders and better supervisors, we can eliminate the equation that results in a maintenance-related aircraft mishap.

Performing aircraft maintenance can be challenging in today's Air Force.

Shrinking manpower, combined with a steady-state operations tempo, can produce disastrous results. Maintainers can feel the pressure of the flying schedule and maintenance deadlines. This was never more evident than a swing-shift crew performing aircraft maintenance late into a Friday night.

The task seemed simple; complete a few time change maintenance tasks on an engine and wrap up for the weekend. There were, however, complicating factors. Engine maintenance was interrupted multiple times by supervision for competing priorities, resulting in overlooked and skipped maintenance steps as the maintainers being bounced between jobs. Each time the maintenance crew returned to the engine, additional broken components were discovered, extending the once short maintenance timeline to a lengthy 12-hour shift. Being that it was a swing-shift Friday night, there would not be an incoming shift to relieve the maintenance crew, leaving them to finish all the work they had started. The Friday crew began to feel the time crunch and pressure from leadership to conclude all tasks inside of the 12-hour day. The time-crunch pressure, combined with bouncing from one maintenance task to the other, led to improper installation of engine components, and was not identified during the 7-Level inspection. The night crew wrapped up and went home for the weekend, leaving the engine operational checks to be accomplished on the following Monday morning. Needless to say, once the engine ignited, numerous parts of the engine exhaust section sheared off and fell to the ground. The ground run was terminated and investigation into the costly mishap began.

What were the determining factors that led to this mishap? A single crew staring down the wrong end of a 12-hour shift while working numerous maintenance tasks simultaneously. Also, there was a 7-Level that failed to identify the incorrectly installed engine components. And finally, the pressure to complete a growing maintenance task list inside of a rapidly closing timeline rounded out the equation for a mishap.

These human factors ultimately led to extensive engine damage of a fighter aircraft and provide a classic example of how numerous human factors can lead to an aircraft mishap. Passing the maintenance over to a weekend duty crew, concentrating on one task at a time, and performing a thorough 7-Level inspection could have mitigated this mishap and saved the Air Force a large sum of money.



Firefighting Symbols

101

What is a firefighting symbol?

A firefighting symbol, also known as a fire symbol, is used as a back-up precaution for alerting emergency response personnel to the explosives or chemical agents present in a specific area, or within a facility. The Air Force requires these symbols to be prominently displayed on the outside of the facility, easily visible from approach roads.

What does each symbol represent?

Although not all inclusive, here are the most common symbols you will come across on most Air Force installations.

Fire Division Symbols:



Mass Explosion Hazard – Blast is the primary hazard in this division. These explosions generally cause severe structural damage to adjacent objects. Example munitions range from dynamite to 2,000 pound bombs.



Non-mass Explosion, Fragment Producing – The explosion of these munitions will throw fragments, firebrands, and non-functioned items from the point of initiation. Blast effects are limited to the immediate vicinity and are not the primary hazard. Grenades are a great example.



Mass Fire, Minor Blast or Fragment – Items in this division burn vigorously and the fires are difficult to put out. Rocket motors and flares are two munitions that fall within this division.



Moderate Fire (no blast or fragments) – Items in this division present a fire hazard but no blast hazard. There is virtually no fragmentation or toxic hazard beyond the fire hazard clearance ordinarily specified for high-risk materials. Almost all small arms ammunition (9mm, 5.56, 7.62, 12ga, etc) are included in this division.

Chemical Agent Symbols:



Set 1 - Warns firefighting personnel of highly toxic chemical agents in the storage facility. The vivid icon in red notifies firefighters that they must wear a service-certified gas mask, impermeable suit, hood, and boots.



Set 2 - Lets firefighters and workers in the facility know about the presence of harassing agents, riot control agents, and smoke in the facility. Yellow icon notifies firefighters that they must wear a service-certified gas mask/self-contained breathing apparatus (SCBA), permeable coveralls, and protective gloves.



Set 3 - Protects firefighters against dangers of white phosphorous and other spontaneously combustible materials stored in the facility. The white icon reminds firefighters to wear a service-certified gas mask/self-contained breathing apparatus (SCBA), flame-resistant coveralls, and gloves.



Breathing Apparatus - Effectively communicates that a protective mask is required to prevent inhaling smoke from incendiary mixtures.



Apply No Water - Makes firefighters aware that using water to extinguish the fire will cause a dangerous reaction.

Aircrew Safety Awards of Distinction

Zapper 11 Crew – 41 ECS, 55 WG, Davis-Monthan AFB, Ariz. (August 2015)
Capt Lindsay Yip, 1Lt Nathan Siemens, SSgt Andrew Cohea – 340 EARS, 379 AEW, Al Udeid AB, Qatar (September 2015)
Bone 13 Crew – 37 EOG, 379 AEW, Al Udeid AB, Qatar (October 2015)

Crew Chief Safety Awards of Distinction

SrA Jacob A. Heater – 9 AMXS, 9 RW, Beale AFB, Calif. (August 2015)
SSgt Christopher C. Anderson – 552 AMXS, 552 ACW, Tinker AFB, Okla. (September 2015)
SSgt Anthony E. Mills – 14 EFS, 407 AEG, Muwaffaq Salti AB, Jordan (September 2015)
SrA Marco E. Garcia – 325 AMXS, 325 FW, Tyndall AFB, Fla. (October 2015)

Flight Line Safety Awards of Distinction

TSgt Michael J. White – 455 EAMXS, 455 AEW, Bagram AF, Afghanistan (August 2015)
Crew of Grim 25 – 1 ACCS, 55 WG, Offutt AFB, Neb. (September 2015)

Ground Safety Awards of Distinction

SrA Nathaniel R. Wilder – 552 MXS, 552 ACW, Tinker AFB, Okla. (August 2015)
SSgt Marissa J. Hastings – 55 WG, Offutt AFB, Neb. (September 2015)
SSgt Adam J. Tollett – 966 AACs, 552 ACW, Tinker AFB, Okla. (October 2015)

Pilot Safety Awards of Distinction

Capt Stephen L. Montgomery Jr. – 1 FW, Joint Base Langley-Eustis, Va. (August 2015)
Maj Jack A. Nelson – 5 RS, 9 RW, Osan AB, ROK (September 2015)
Capt Richard L. Olson – 354 FS, 355 FW, Davis-Monthan AFB, Ariz. (October 2015)

Unit Safety Awards of Distinction

46th Expeditionary Reconnaissance Squadron – 386 AEW, Ali Al Salem AB, Kuwait (August 2015)
9th Munitions Squadron – 9 RW, Beale AFB, Calif. (September 2015)
9th Munitions Squadron – 9 RW, Beale AFB, Calif. (October 2015)

Weapons Safety Awards of Distinction

SSgt Mitchell C. House – 407 ESFS, 407 AEG, Muwaffqa Salti AB, Jordan (August 2015)
SSgt Charlie G. Loper – 432 AMXS, 432 WG, Creech AFB, Nev. (September 2015)
SSgt Brandon M. Mansour – 407 ESFS, 407 AEG, Muwaffaq Salti AB, Jordan (October 2015)

Flight Safety



Maj Alfred W. Chaffee, 62 ERS, 451 AEW, Kandahar AF, Afghanistan. During scheduled flight operations, Maj Chaffee safely recovered a \$12.9M MQ-9 asset on six separate occasions with significant IFE issues. The first IFE of note was an aircraft returning to base due to a suspected oil leak. During the course of the approach the oil level steadily dropped and at one point was only showing seven percent of its fuel reserves remaining. Upon landing, the recovery maintenance crew confirmed an oil leak due to a ruptured oil supply line. A second IFE aircraft was an emergency divert where Maj Chaffee successfully gained the aircraft with the oil pressure dropping below normal indications. He initiated the simulated flame-out recovery to the airfield and was able to safely land the aircraft. During the flame-out approach, the aircraft pressure steadily dropped reading below limits. After recovery, maintenance discovered the oil supply line to the Fuel/Oil heat exchanger had been ruptured resulting in complete loss of oil. He also recovered an MQ-9 with a failed MTS ball with a simultaneous unsafe gear indication. The failure of the MTS precluded the crew from identifying if the gear had correctly extended to the required extent. After trouble shooting the MTS, the crew was able to get the Multi Target Sensor (MTS) ball to work for 30 seconds verifying gear position before another MTS failure. Maj Chaffee also performed 16 bad weather recoveries due to thunderstorms and crosswind out of limit situations. Eight of the 16 were in one duty shift; his actions during this time far exceeded normal ops.

Ground Safety



SSgt Michael A. Bethea, 9 RW, Beale AFB, Calif. SSgt Bethea inspected 31 facilities within three units and identified 19 potential hazards. He recommended corrective actions and personally followed up on all discrepancies to ensure compliance. He also conducted seven briefings on traffic safety training for First Term Airmen Center attendees, new Unit Safety Representatives, and new Motorcycle Safety Representatives. These briefs trained 45 personnel on lifesaving skills and program management which resulted in a 40 percent drop in repeat vehicle incidents. He conducted mishap investigations on six squadrons, prepared eight reports, and recommended eight corrective actions to prevent recurrence. During a self-inspection, Sgt Bethea audited 18 mishap reports validating valuable trend analysis data and ensuring 100 percent program compliance. He also served as 9 RW Safety Office's Confined Space expert and strictly managed 10 programs, mitigated hazards and training shortfalls, maintaining zero mishaps. He contoured wing safety SharePoint used by 3,500 Airmen and civilians. By enhancing the SharePoint drive (making the course registration section for six different classes more user-friendly) he was instrumental in improving mission efficiency by 87 percent. SSgt Bethea positively represents Team Beale, the safety community, and the Air Force on a consistent basis. He truly exemplifies the United States Air Force core values showing integrity, selflessness, ensuring a stout safety culture is maintained, and living by the "Safety Always" mantra.

Weapons Safety



MSgt Wallace A. Fortier, 386 AEW, Ali Al Salem, Kuwait. MSgt Fortier is responsible for the weapons safety program for the 72nd Expeditionary Air Support Operations Squadron at Camp Buehring, Kuwait, and the 64th Expeditionary Helicopter Maintenance Unit in Erbil, Iraq. He managed 116 explosive site plans monitoring over 2,000 assets totaling 132,000 pounds of explosives worth 85 million dollars in direct support of Operations INHERENT RESOLVE and FREEDOM's SENTINEL. His direct oversight ensured zero mishaps during the 450 percent surge of assigned aircraft and air tasking order commitment rate. Sgt Fortier identified explosive storage shortfalls in an enduring munitions storage area project design worth six million dollars. His astute attention to detail was realized when he immediately identified and corrected 11 hazards, guaranteeing the safe operations across two bases and protecting 4,220 US and Coalition personnel. His exceptional management of five separate remote piloted aircraft weapons safety programs including US and Italian MQ-1 predators, US and UK MQ-9 Reapers and US Army Grey Eagles ensured the safe and successful release of 97 Hellfire missiles and 190 enemies killed in action. His commitment to weapons safety continues to guarantee a safe operating environment for the 386th Air Expeditionary Wing.

File an ASAP Today!

Automatic Ground Collision Avoidance System (AGCAS) is a system which uses a database of digital terrain data and information on the aircraft's position and velocity to determine if there is an impending controlled flight into terrain (CFIT). If the system determines CFIT is imminent, the flight controls automatically roll the aircraft upright and pull up to avoid ground collision.

Actual ASAP Submission. This event did not result in a mishap, but provides valuable information worthy of sharing.

4-ship of F-16s on a low level in hilly/mountainous terrain to ingress the bombing run for a Basic Surface Attack ride. Wx was approximately SCT 030, 5nm Vis at 1430L. All F-16s were carrying 2 x BDU-50s and 510 x 20mm (5.5g limited). The low level portion was to rehack the Event Pilot (EP), flying as #2 in the formation, and recertify him down to 500' AGL. Approximately 5 minutes into the low level, while flying over hilly/mountainous terrain with peaks approximately 2-3K' MSL, the EP had an instructor input about AAA off his right 2 o'clock. The EP began executing a AAA threat reaction IAW AFTTP 3-1 procedures. Approximately 10 seconds into the threat reaction the EP was approximately 20 degrees nose high and 1,500 ft AGL crossing a ridge line. The EP executed an aggressive nose down "last ditch" type maneuver over the ridge line into the valley. The EP failed to realize the that the ridge line in front of him would be a factor during this maneuver. At approximately 25 degrees nose low and 130 degrees of bank, the Automatic Ground Collision Avoidance System (AGCAS) activated and initiated a recovery. The AGCAS initially rolled the aircraft to wings level and then began a 5g pull up. The EP overrode the AGCAS by pulling additional G's reaching 6.7g's. The aircraft crossed a subsequent ridge line at 380' AGL and approximately 20-30 degrees nose high. The AGCAS likely saved the EP/aircraft from impacting terrain. An AGCAS Flyup/Over G is not an emergency, so none was declared.

SUBMITTER SUGGESTIONS

Being that the low level portion was to rehack the EP, more emphasis should be made during the brief about low level training rules and TTPs. The EP was familiar with all rules/regulations but did not demonstrate this during the flight. The EP failed to use the 1% rule for dive angles IAW 11-214 paragraph 3.7.1 Additionally, the EP banked over the 120 degree maximum allowed IAW 11-2F-16V3 paragraph 3.15.6. As these two areas are the most likely to be violated during a low level, the instructor should tailor the brief to the "student" to ensure adequate coverage of these areas. Additionally, a thorough debrief relating to the areas described above, as well as TTPs to prevent this from happening again, were discussed as a 4-ship. Finally, on a ride meant to rehack the EP, staying at 1,000' AGL for a longer amount of time, and then executing a AAA threat reaction further into the low level environment and over flat terrain would likely have been the smarter move and could have prevented this from happening.

Do you have a lesson
learned to share?
<http://safety-masap.com>

Mishap Statistics Scoreboard

FY15 Flight

As of September 30, 2015

	Fatal	Aircraft Destroyed	Class A Aircraft Damage
1 AF			
9 AF	1	2	
12 AF		1**	
25 AF			2
USAFWC	1	1	
ANG (ACC-gained)		1	
AFRC (ACC-gained)		1	

FY15 Ground

As of September 30, 2015

	Fatal	Class A	Class B
9 AF	3	5	4
12 AF	3	5	9
USAFWC	1	1	0
25 AF	2	3	2

FY15 Weapons

As of September 30, 2015

	Class A	Class B
9 AF	0	0
12 AF	0	0
USAFWC	0	0

Legend

Class A - Fatality; Permanent Total Disability; Property Damage \$2,000,000 or more
Class B - Permanent Partial Disability; Property Damage between \$500,000 and \$2,000,000
Class C - Lost Workday; Property Damage between \$50,000 and \$500,000
(Class Description Effective October 1, 2009)

* Fatality ** Non-rate Producing *** Performing SOUTHCOM Mission

1 = Fatal 1 = Fatal due to misconduct

Flight Notes

FY15 has been a challenging year of flying. First and foremost we are saddened by the loss of two members of our ACC family due to flight-related mishaps. Flying isn't inherently dangerous, but it can be unforgiving. It's always difficult to process the loss of our fellow Airmen. Our thoughts are with the family and friends of these warriors. Of the 16 Class A mishaps the command suffered this year, half occurred in deployed locations and 11 aircraft were destroyed. While both Class A and C mishaps and rates increased, ACC Class B mishaps were lower than they have been in over 10 years. Additionally, ACC BASH programs have yielded the lowest total number of strikes in over 10 years. With continued vigilance and attention to detail, we can reverse the negative trends and improve upon the positives. In these high demand environments, know your limits and those of your wingmen. Stayed engaged, fly safe, and check 6!

Ground Notes

FY15 was bitter-sweet for ACC. We had "Zero" fatal PMV-4 mishaps this year—a first in the history of ACC! However, we suffered "10" PMV-2 fatalities during this same timeframe as opposed to only one in FY14. Class B mishaps were also on the rise—15 Class B's in FY15 (as opposed to only four during the same time last year). Most Class B mishaps were work related with only two involving motorcycles, reinforcing the fact PMV-2 mishaps almost always resulted in a fatality. The good news is that traditional solutions to reduce the number of preventable motorcycle fatalities have been effective; yet still, new approaches are needed to battle against unsafe rider behaviors, reduce distracted driving and curb alcohol-impaired riding. We have learned that when our riders are operating within their abilities and the law, they make good decisions and are better able to react when threatened by hazards. Let's remain cognizant and stick to a sound plan.

Weapons Notes

It is incumbent for Airmen to ensure safety is an important consideration in all real world and training events. Ammunition and Explosives (A&E) are designed to neutralize the enemy, but if not utilized properly, they can maim or kill a service member. Keep that in mind when handling A&E, one mistake can be unforgiving. Repetitive training and following guidelines are essential to mishap reduction. Speaking of which, ACC experienced only one mishap this quarter. Great job team ACC!

Symbols for Mishap Aircraft





**In This
Issue**

Share Your
Story! **PAGE 4**

Skidding out of
Control **PAGE 10**

Rider's
Rap **PAGE 12**

But First! Take
a Selfie **PAGE 14**

Getting
Fit **PAGE 16**

OVER the Edge

MAGAZINE



Winter Edition





How was his "Gear?" _

Do you think he had a good "Plan?" _ _ _ _ _

What about his "Skills?"



✓3 What is Check Three you ask? Check 3 is a quick and easy method to assess any activity or event for possible hazards. The "Check 3" approach is assessing three areas referenced by the common acronym GPS. In this case, GPS is not referencing a navigation aid. Rather, GPS is: Gear - Plan - Skills.

This allows a quick review of your activity to highlight any issues or hazards. For instance, "G" (gear) may be your equipment, vehicle, or availability of drinking water. "P" (plan) may be the timeline, weather, sequence, and backup plans. "S" (skills) may be your rest level or overall experience level. If you see an issue or hazard in any of the areas, then adjust an area to mitigate the hazard, especially the plan. Check 3 allows you to have a quick mental method to assess any activity.



- 4 | SHARE YOUR STORY!**
by Major (Chaplain) William K. Thornton, USAFR
- 10 | DRIVER'S DIALOG**
- 12 | RIDER'S RAP**
- 14 | BUT FIRST! LET ME TAKE A SELFIE**
by Dr. P, BHOP
- 16 | GETTING FIT**
by Tech. Sgt. Ray E. Otero, 673 ABW/SEG, JB Elmendorf-Richardson, Ak.



This was an obvious Check 3 Fail!

Send us your Check 3 analysis by March 1, 2016 and we'll print the best (funniest) in a future issue of *Over The Edge* ... **AND** we'll send you a free Check 3 activity bag!

acc.sem@langley.af.mil

SHARE YOUR STORY!

BY MAJOR (CHAPLAIN) WILLIAM K. THORNTON

I was raised in Warren County, Mississippi, just a short distance from the Vicksburg National Military Park. As a young teenager, I rode my bike and trekked through portions of the park too many times to count. I ran up and down hills where battles raged, crawled onto monuments, sat atop huge statues of cavalymen saddled on their horses, stood next to monuments of soldiers with their weapons raised, and strolled through the Vicksburg National Cemetery and its near-17,000 graves honoring the fallen.

The glorious Illinois State Memorial rotunda is near my childhood home. It is modeled after the Roman Pantheon. I've walked up its massive steps and spent hours viewing the 60 unique bronze tablets lining its interior walls, reading the names of the 36,325 Illinois soldiers who participated in the Vicksburg Campaign. Each of those names represented a story ... a story of sacrifice and hardship, separation from loved ones, acts of valor, and service before self.

I wish I could talk to them and hear their stories. Their names being placed on the bronze tablets is the only recognition most of these soldiers ever received for their sacrifice and service. Many, no doubt, performed heroic deeds in the siege of Vicksburg and in their service as soldiers. But we don't know what they did. What they accomplished as individuals was generally not recorded, except maybe in personal diaries. Their stories were often unshared. You know how it is with war veterans who don't talk about their wartime experiences. These are too often the unheralded heroes.





and left to die. When the communists invaded in June 1950, it is said they killed every child they found. Blaisdell determined this would not happen again if he could do anything about it. He and Strang obtained a truck and made many round trips to transport the Korean children from Seoul to Inchon Harbor, roughly 20 miles away, where a ship was promised by the Korean government to transport the children to safety. They were the only U. S. military personnel to remain with the orphans during the grueling four-day wait for a boat that never arrived.

The danger to Blaisdell, Strang, and the children and volunteers in their care was very real and very present. They went days without food or sleep as they carried out their rescue. Whooping cough and measles broke out among the orphans. Eight of the weakest children died. The fate of over a thousand was in their hands. Their

Fast forward 87 years to another war raging on the Korean peninsula. It was December, 1950, and the U. S. Eighth Army had withdrawn from western North Korea due to pressure from overwhelming numbers of communist troops. By the end of the month, most of North Korea will be back in communist hands, with communist forces crossing the 38th parallel into South Korea and pressing toward Seoul.

Herculean efforts have historically been made by innumerable military members to protect the innocent from the ravages of war. The Korean War was no exception. There was grave concern regarding the evacuation of civilians in peril; Americans in particular, the population in general, but especially for the children who were in the way of the military onslaught. Seoul had been nearly destroyed. Hunger, thirst and disease were common. Babies and children were abandoned or their parents killed by the war.

Chaplain (Lt. Col.) Russell L. Blaisdell and Chaplain Assistant (Staff Sgt.) Merle "Mike" Y. Strang worked together in what is today referred to as a Religious Support Team (RST). Along with Chaplain (Col.) Wallace I. Wolverton, they established an orphans processing center. They would go into the streets, pick up abandoned boys and girls, and bring them to the center, where the children were cleaned up, given food and shelter, and then take the children to the local orphanage. When Wolverton left South Korea, Blaisdell and Strang along with volunteers continued the work of providing for the needs of abandoned children.

As the communist forces advanced, and Seoul was being evacuated, citizens fled and children of the orphanage were again abandoned



means of rescue was nowhere to be found. But leaving the children to the advancing Chinese would have meant their certain massacre.

Blaisdell went to Air Force Col. T. C. Rogers, Chief of Operations, 5th Air Force, for assistance in the evacuation of the children. Rogers directed Blaisdell to take the children to the airport at Kimpo, another 28 miles away, where C-54s could fly the children to safety. Blaisdell pulled rank as he and Strang commandeered several trucks to transport the cold, starving and sick children to Kimpo, where 16 C-54 transport planes from the 61st Troop Carrier Group flew 950 orphans, six months to 1 years of age, and about 110 orphanage workers to safety at Cheju-du, an island off the South Korean coast.

The planes waited over an hour until the trucks bearing the children arrived. When they arrived at Cheju-do, the chaplain and chaplain assistant helped in resettling the orphans. This airlift, known as "Operation Christmas Kidlift," "Operation Kiddie Car," and "Operation Little Orphan Annie," took place on Dec. 20, 1950.

Precious lives were saved, and just in time for Christmas. To quote from an article published in Airman Magazine, December 2000, titled, "A Christmas Story ... Chaplain Saves Orphans During Dark Days of Korean War, by Senior Airman Elaine Tarello:

"And it was the beginning of a new life for the children, like Choi Chu-ja, who was on a plane that day. 'The only memory I have of that plane ride is sitting with the other children on the floor,' she said. Now named Susie Allen and the mother of four living in Chico, Calif., she owes her life to Chaplain Blaisdell. 'I don't know how to describe the feelings in my heart. They have just always been a part of me,' she said. 'They were my heroes.'"





No doubt, all of those rescued would agree.

Senior Airman Elaine Tarello continues to write, "One year after the rescue ... Chaplain Blaisdell returned to Cheju-do. The head of the orphanage, On Soon-whang, and the children held a parade in his honor ... The orphanage moved back to Seoul soon after the invasion ..."

Blaisdell returned to a hero's welcome in South Korea in 2001, where he was greeted by the First Lady of South Korea, and awarded an honorary Doctorate of Social Welfare. He has been referred to as the "Schindler of Korea," after Oskar Schindler,

the German businessman who saved the lives of more than a thousand Jewish refugees during the Holocaust by employing them in his factories. In 2003, Blaisdell received the Air Force's highest award for chaplains,



the Four Chaplains Award for extraordinary humanitarianism. Blaisdell died in 2007.

Strang died in 1998 without ever receiving any official recognition for his role in saving the orphans during his lifetime. He was involved in rescuing many of the estimated 6,000 orphaned and homeless children found in the streets, alleys and bombed buildings of war-torn Seoul. He was posthumously awarded the Bronze Star in 2003. Then-Air Force Chief of Chaplains, Maj Gen Charles C. Baldwin, presented the Bronze Star to Strang's brother, the Rev. Homer Strang. Strang said his brother was a humble man, not one given to talk about his wartime experiences.

In a personal letter written to now-civilian Strang in 1957, Blaisdell wrote:



"I would like "to take this opportunity to say again that I have the highest respect and admiration for you in your integrity, devotion to duty, and especially in your self sacrifice during the time we worked with and transported the orphans. No one could have conceived of a more devoted, hardworking individual to have by his side during such a strenuous, uncertain and, at times, dangerous job than I had in you."

These sentiments were mutual, as Strang wrote in another letter of his highest regards for Blaisdell.

As I read those post-war letters between chaplain and

chaplain assistant, and the accounts of the Operation Christmas Kidlift, I thought again about the bronze tablets within the Illinois State Memorial, and the stories behind the names on the tablets. Stories that need to be told ... and told again.

The story of these two fellow warriors has inspired many through their faith, perseverance, and professionalism. Blaisdell and Strang didn't save the children and volunteers from certain war-time death for personal credit, recognition or a medal. In fact, credit for their heroic accomplishments was claimed by another, but I won't go into that story.

Blaisdell added in his letter to Strang:

"The goal of our efforts, in regard to the orphans ... was the saving of lives, which would otherwise have been lost. That was accomplished. In a sense, Mike, well-doing has its own reward, which is not measured in dollars, prestige, or good will ..."

They did it because it was the right thing to do, and they could do nothing less ... or nothing else.✱



SKIDDING OUT OF CONTROL

Skidding out of control on icy roads toward a solid object is a decidedly unpleasant event. It is even more unsettling if the object is a roadside barricade meant to prevent vehicles from plunging off an adjacent cliff. The more disastrous scenario is that you have lost control of your 3,000-pound SUV during a snowstorm and are sliding quickly toward a subcompact filled with a pair of astonished parents and their terrified kids. Unless you have been trained in how to respond to a snow- or ice-induced skid, you will invariably succumb to what the experts call “target fixation.” That is: focusing on your impending doom instead of taking proper evasive action. This will, no doubt, result in a crash. Below are some tips to help you when you start skidding out of control.

1. **Be prepared:** Before you set out in winter weather, make sure your vehicle is properly equipped (i.e., snow tires or chains in extreme conditions).
2. **Slow down:** Driving too fast is the No. 1 winter driving error. Slippery roads make every mistake happen faster and more dramatically. Don't think antilock brakes, stability systems or other vehicle control mechanisms will help you if you're sliding.
3. **Look ahead:** Be aware of road ice and other slippery conditions, but you should also double the distance you normally allow between you and the car in front of you. Look ahead and get ready for corners and other obstacles before you arrive at them.
4. **Brake before you enter a corner:** Smoothly apply your brakes before you reach a corner and then release the brakes and use all the grip of the car to corner. Then, once you are through the turn, accelerate out.
5. **Be informed:** Regardless of whether your vehicle is rear-wheel, front-wheel or all-wheel drive, the results of a loss of balance is the same. The result can be that the car will pull to the side in a corner and spin out.
6. **Learn how to control a skid:** Turn into the skid. Many over steer skids can be controlled and a disaster averted simply by releasing the brake and gently accelerating. Be careful not to over-accelerate or the tires may spin and you will over steer and slide out of the turn. In an understeer skid (when your car refuses to turn and is sliding), once again it's important not to react instinctively by over-correcting the steering wheel, by braking or by doing both simultaneously.

Mastering control of your vehicle in snow and other winter driving conditions comes with learning proper driving techniques and with experience. Also, keep a first aid kit and winter supplies in the car. Go slow and stay safe.

Poser or Pro?

Which are You?

HEAD – That beanie helmet *may* be legal and it may protect your head. *Maybe* not...you only have one brain so why take the chance?

EYES, EARS AND FACE – Watery eyes, deafened by wind blast and able to identify at least 25 different insects by their flavor...another mark of the poser.

SHOULDERS AND ARMS

– Wish you hadn't gotten that “I Love...” tattoo just before the big break-up? No worries, getting personal with the pavement will remove that in no time.

HANDS – Think those half-finger gloves make you look cool? Real riders call those “Nose-pickers”—that's about all they're good for.

KNEES – Posers collect sunburn, windburn, flying debris and maybe road rash. Just remember, there's no such thing as a fenderbender when you're on a motorcycle.

FEET – Personal contact with the shift lever, brake pedal, hot engine or the asphalt will forever change your perspective on footwear...wind on the toes is not “cool!”

HELMET – Well fitted helmets are comfortable, quiet and protect you from impacts. They're a smart rider's first line of defense.

FACE SHIELD – Experienced riders know how many UFOs are out there and make sure they're prepared. Clear vision and saving face are a priority with pros.

JACKET – Armored, adjustable vents for changing weather conditions and highly visible to others. A good riding jacket is the pro's “home away from home.”

GLOVES – provide a good grip on the bars as well as protecting those pinkies from flying objects, sun and cold. Pros have several pairs to adjust for changing conditions.

PANTS – Another important factor in preventing hypothermia, dehydration, sunburn and windburn. Also, most motorcycle injuries are to the lower extremities. Anyone who is “in the know”, recognizes the value of comfort and protection from the road.

BOOTS – Provide comfort in hostile environments, protection from hot or sharp motorcycle parts and a good grip on the foot rests and the road. A pro knows the importance of all these.



POSER

A clearly unsafe rider who failed to Check 3!



PRO

A smart, knowledgeable rider who is “Check 3 approved.”



Did you know?

Motorcycle riding is a perfect activity to apply Check 3!



check3gps.com



Motorcycles are fun and fuel efficient, but it's a known fact that they are more dangerous than a car. The truth of the matter is, motorcyclists are 30 times more likely to die in a crash than people in a car (according to the Insurance Institute for Highway Safety). Many enthusiasts enjoy a lifetime of riding without injury. The key to optimizing your odds is to be prepared and avoid risks. Basic safety initiatives will help you be safe to ride another day.

ACC lost 10 Airmen (nine male and one female) to motorcycle accidents in FY15, compared to only one in FY14. This is a disturbing trend and a huge concern for many reasons: The devastation it causes the member's family; parents are without a son, a wife without her husband or a child without their dad. Another is the loss to the ACC family. We tend to make very close connections to those we work with in the AF. The loss is overwhelming and takes months, if not years to finally get back to somewhat of a normal life. Last, but not least is the loss to the AF mission. The mission will go on but will be severely hampered by the loss of even one Airman! Stay safe, always check 3, and keep the shiny side up!

Don't be a POSER

... it wouldn't end well for you!

Use your head.

A full-face helmet that's approved by the DOT is the best choice. Modern helmets are strong, light weight and comfortable; they also cut down on wind noise and fatigue. The Snell Memorial Foundation recommends replacing a helmet every five years or sooner if it's been damaged or has been in a crash. You'll also want effective eye protection; don't rely on eyeglasses or a bike's windscreen.

Wear the right gear.

Jeans, a T-shirt, and/or sandals are recipes for a painful disaster on a bike! Instead, you want gear that will protect you from wind chill, flying bugs and debris, and, yes, lots of road rash if you should slide out. For maximum protection, go for a leather or other reinforced jacket, gloves, full pants, and over-the-ankle footwear, even in summer. Specially designed jackets with rugged padding and breathable mesh material provide protection as well as ventilation for riding in warm weather. Be visible—choose gear in bright colors.



Ride defensively.

Be extra alert! Keep an eye out for cars suddenly changing lanes or pulling out from side streets. Don't tailgate! Keeping a safe following distance is critical, both to ensure you have enough stopping distance and so you have time to react to obstacles in the road. An object that a car might easily straddle could be a serious hazard when on a bike.

Avoid bad weather.

Slippery conditions reduce your margin for error. Rain not only cuts your visibility, but reduces your tires' grip on the road, which can make cornering tricky. If you need to ride in the rain, remember, the most dangerous time is right after precipitation begins, as the water can cause oil residue to rise to the top.

Watch for road hazards.

A motorcycle has less contact with the pavement than a car. Sand, wet leaves, or pebbles can cause a bike to slide unexpectedly, easily resulting in a spill. Bumps and potholes that you might barely notice in a car can pose serious danger when on a bike. Railroad tracks and other hazards should be approached as close to a right angle as possible, to reduce the chances of a skid.

Be ready to roll.

Before each ride, do a quick walk-around to make sure your lights, horn and directional signals are working properly. Check the chain, belt or shaft and the brakes. Inspect tires for wear and ensure they're set at the proper pressure.

But first! Let me take a

Selfie

BY DR. P, BHOP

A great example of how the brain is wired for self-centered thoughts and emotions, which then dictate behavior (e.g., bathroom mirror selfies), is how according to a recent study, men *admire* their appearance approximately 23 times per day whereas women check for *flaws* 16 times per day. Thus we *all* already take mental “selfies” throughout the course of a day.

Those same introspective mechanisms allow us to assess the proportion of our emotional experience. In fact, when emotions became significantly heightened, it results in a phenomenon called “emotional flooding.” Emotional flooding occurs when neurochemicals override the brain’s usual frontal lobe reasoning function and results in a physiological back lash of brain stem behaviors. Simply put we sometimes become so overwhelmed with emotion (e.g. anger) that instead of thinking (e.g., articulating concerns) we react (e.g., Hulk Hogan fist punches a wall).

Entering the Flood Zone

Physiologically you might notice emotional flooding along with muscle tension, headaches, spilling of ocular liquid, upset stomach, interrupted sleep, and elevated heart rate (usually above 100bpm). As a result of this assault on our frontal lobes, *thinking* will also deteriorate (a la Pinky vs. the Brain). This may result in:

- **Hyper-focus** – So concerned with being tardy, you forget to drop your child off at daycare.
- **Decrease in memory quality and quantity** – So nervous you don’t remember your own marriage ceremony. Did you even say “I do?”
- **Narrowed perspective** – During a fit of road-rage you damage your classic Yugo and fail to notice that the passenger is currently sardined (literally) and you’re bleeding.
- **Decreased social functioning** – In your excitement over Olympic badminton, you fail to compliment your wife’s new “minimalist outfit” and mumble something like “more money wasted.”

Balancing the Force (aka maintaining cerebral equilibrium):

- **Sleep:** Seven to nine hours for 18-64 year olds. Fatigue affects the frontal lobe first.
- **Practice:** Choose to discuss emotional topics during non-emotional times. This allows you to control the environment and diminishes the “surprise” factor which can start the emotional flooding.
- **Imagery:** Mentally proactively rehearse potential scenarios and acceptable responses.
- **Time-out then Re-engage:** Take a 20-30min break; do something mindless or relaxing (e.g., click-bait, reading a magazine), to rebalance emotions and thinking. Re-engaging to complete the task or finish the discussion (as opposed to hiding in the garage for days) is a vital component of brain training.
- **Emotion Identification:** Go beyond mad, sad, and happy as emotion words. Extend your vocabulary and identification of emotions to help manage them and increase problem solving.
- **Social support:** Yep you need team mates. Have we learned nothing from the A-Team or Cheers?

Bottom line:

Take regular emotional “selfies.” Meaning, gauge your current mood by taking stock of physiological cues and proactively balance emotion and thought. Need help getting the right angle? Ask me for help. I may have an app for that.

Sweet Emotion

BY MEG, AEROSPACE AND
OPERATIONAL PHYSIOLOGIST

*Feelings, emotions, and mood, all affect temperament. What do they have to do with anything? **Everything!***

Psychologists studying stress in humans and animals quickly found they could not easily attribute the results of their experiments to just stress because emotion and even temperament affected their participants’ performance. They could not always mince out the effects of negative or positive emotion from the effects of stress.

Aside from the dramatic effects of “emotional flooding” on cognitive processing (a phenomenon called “cognitive interference”), emotions can affect how we perceive, integrate, and process information in more subtle ways.

Negative moods as induced by something as obvious as dwelling on a bad experience or as subtle a cue as a sad face flashed on a screen for a fraction of a second affected attention and decision making via risk assessment and tolerance. People experiencing negative or sad moods display a more narrow perspective, quite literally unable to see the larger picture (the **hyper-focus** Dr. Powell mentioned) but are more detail oriented, more readily attend to emerging cues and may perceive they need more information in order to make decisions.

On the other hand, positive or neutral emotions drive a more generalized point of view. People in a relatively positive mood expend less cognitive energy searching for solutions because they perceive situations as more benign, paying less attention to detail but display greater creativity in problem solving.

Feelings are for amateurs

Yes, experts can modulate the effect of emotion on performance but they only achieve Jedi-level after much practice working under various types of stress and emotion. For instance, even though experts might compartmentalize non-task related emotion (fight with a spouse; unruly offspring) better than novices, they may underestimate the effects of non-task related emotion on their performance. Furthermore 1) everyone has a threshold and 2) task related emotion (a “standard” mission vs. fear of loss of friendly forces) tends to have a bigger effect on performance.

Good news!

Even though emotions are typically automatically and unconsciously induced (reactionary), they can also be controlled and deliberately modulated. Thus, emotionality need not be a liability. Early research found emotionality correlated well with drive and motivation. Special Operations teams and elite athletes are proof that with practice, humans are very apt at identifying triggers, moderating response, and using emotion to **enhance** performance.

Getting Fit



BY TECH. SGT. RAY E. OTERO

I am a self-proclaimed “gym rat” who has been into lifting weights and fitness for nearly 20 years with the aspirations of becoming a certified personal trainer.

My father was a professional bodybuilder in the 70’s (Mr. New York) and I have taken his knowledge, along with my extensive research, to build

programs not only for myself, but also for fellow co-workers throughout my career.

What follows are some thoughts and observations on starting your own fitness program.

There you are standing in front of that weight bench, treadmill, or running track, ready to begin your fitness journey. You’ve purchased new workout gear,

maybe some new supplements that are all the rage and loaded that playlist on your iPod. You are ready to go!

But are you? Most people forget the most important piece when it comes to starting a new workout routine—research! Now, that could mean a number of things. It could mean doing your research when it comes to

the actual “working out” part. It could also mean checking with your doctor and having a full check up to ensure your body is capable of taking whatever stress you are getting ready to put it through.

It’s a shame when folks finally get the motivation or time to do something about their fitness, but because of either poor planning

or not enough research, they end up doing more harm than good.

A simple search in the Air Force Safety Automation System using the parameters of “Sports, Recreation and Individual Fitness” and “Combat Support and Training” (May 2014-15) reflected 2,577 reportable mishaps in these categories. While a portion of these may be

attributed to activities such as ATV riding, snowboarding, etc., the majority of these mishaps that have come across our desk occurred during some form of physical fitness activity.

In the following paragraphs we are going to discuss some “tips” to ensure you are working out safely and getting the most bang-for-your-buck.

As I mentioned earlier, the first thing to sign off your “pre-workout” checklist is a visit to your doctor. Whether it’s your first time lifting a weight or you have been out of physical activity for a while, you want to ensure all the “gears” are working right. You don’t want to start engaging in physical activity and possibly further injure something that was an issue to begin with, but you just did not know about.

It would also be a great idea to discuss with your doctor the topic of supplements. The variety of supplements out there is astronomical. Speak with your doctor (and possibly a dietician/nutritionist) about your fitness goals and what supplements you are considering using. Keep in mind that the official website for the Food and Drug Administration states, "Although dietary supplement manufacturers must register their facilities with FDA, they are not required to get FDA approval before producing or selling dietary supplements."

What does that mean for you? Well, you could find yourself taking an unregulated supplement that has never been scientifically proven! Do your research! Muscles don't come in a bottle folks, and be wary of any supplement that claims it does! If you do take a supplement, be sure to read the "suggested use" and "warning labels" on the packaging. Bottom line: know what you are taking and how to take it.

Ok, you have received a clean bill of health, decided on what healthy supplements to take, and are raring to go. But wait! Have you figured out your exact “fitness goals”? Are you trying to gain muscle, shred body fat, increase your cardiovascular abilities, or maybe you just want to feel confident about getting into that bathing suit the next time you’re at the beach. Are you training for a particular event such as a 5k run or a physical training assessment?

No matter what your specific goals are, you have to keep them in mind when designing or adopting a new workout routine. You need to learn which types of workouts will help you achieve those goals. While “just winging it” in the gym might have its merits when trying to add variation to a set routine, it is never a good idea to use that as the baseline. While we are on the subject of goals, remember, Rome wasn’t built in a day and neither will your body. It takes time. A good rule of thumb is to start out slow and slightly increase the activity on a weekly basis.

Again, depending on your goals, that could be increasing the weight by five pounds or adding a quarter mile to your run. Our bodies are the best self-defense mechanism ever made! It's that "self-defense" mode that gets us into shape.

Your body adapts to the stressors that you put it under to protect you from getting hurt. That is why our muscles grow and why our cardiovascular system improves with every run or heart rate increasing activity. Your body also gets used to the stressors you put it under. If you do the same thing week after week, your body will just adapt to that particular stressor and not improve beyond that.

The key is to slowly increase your activity as you go. After about a 4-to-6 week period, you should change your routine. Not only can it shock your body a little, but it can also ensure you don't have too much repetition in your movements and exercises. Overuse injuries can occur when you do the same type of exercise over and over again.

Depending on your goals, don't be afraid to change it up and throw in something different every now and then. If you are looking for routines, the internet is flooded with them. Just make sure you pick a routine that you can do safely and will help you meet your goals.

We made it to the doc, picked the right routine, and the day has come to start your fitness journey. You walk into the gym or onto the track and are ready! Remember when we said to “start slowly”? Well, this is our first opportunity to put that into practice; specifically, by warming up and stretching.

Make sure your body is primed and ready to take on those "stressors" you are going to put it under. Start out with a good warm up of about 5-to-10 minutes

and with some stretching before starting the actual activity. By priming your body for the activity, you could help avoid a possible injury.

It is never a good idea to jump right into your routine cold. Your body could get “shocked” and react in a way that can possibly result in an injury. Listen to your body. If

something doesn't feel right—stop doing it! Go back to the warm up and reassess. Your body is usually a really good communicator when it comes to letting you know that something is wrong.

Regardless of your fitness goals, just make sure that you put some thought and research into how you are going to reach

those goals. If you follow these simple tips, it could very well decrease your chances of suffering from an injury that could possibly put you out for some time and derail that fitness train.

Exercise smart, stay in the game, stay challenged, and stay safe. See you at the beach! 🏖️

