

# The Combat EDGE

JULY 2000





# The Combat EDGE

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
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## KEEP AN EYE ON JULY

July is a tough month for safety. We're in the heart of the summer season, the heat index is at the max, PCS moves are at a peak, and vacations leave the home units sometimes in a "barebones" condition. I don't need to tell you about the abundance of stressors in our lives — they are obvious. However, a concern I have is that safety awareness may be waning in the month of July.

Throughout the month of May, commanders at all levels and safety professionals in every unit have roared about the significance of the "101 Critical Days of Summer" — the period from Memorial Day through Labor Day in which ACC, and the Air Force as a whole, experiences an increase in mishaps and fatalities. In general, there was a full-court press to increase everyone's awareness of the hazards of the summer months. June still carried the message to some degree, but I fear the roar has diminished to a whisper for July. I encourage everyone from commanders, to safety professionals, to all supervisors to reinforce the importance of Personal Risk Management for the remainder of the summer, our highest risk period.

Our goal was zero fatalities for the 101 Critical Days, but at the time I'm writing this article, ACC has already had its first fatality for the period — sadly, a young Staff Sergeant was killed in a POV accident on the 2nd of June. This fatality has a common characteristic with the vast majority of our fatal mishaps. There wasn't a commander or supervisor present to point out hazards, and avoid the risks. The point here is that our people are having mishaps alone, and we must encourage them to use Personal Risk Management in every activity, both on and off duty. Sometimes a friend or peer is present when an ACC member is about to assume unnecessary risk — they can intervene with a word of caution.

I ask that we all remain actively engaged on safety awareness during the summer months. Don't let your friends and coworkers become complacent. Remind people to wear helmets when riding sport vehicles, don their life vests when entering the water, re-hydrate at appropriate intervals, and don't mix alcohol with the already high-risk summer activities. If you keep people focused, a part of you goes with them when they are alone — your words may "key" them to take precautions and avoid unnecessary risks.

*Col. Greg "Vader" Alston*  
*ACC Chief of Safety*



# CURRENCY vs. PROFICIENCY

**A**n A-10 pilot flying a continuation training, night surface-attack tactics sortie, using night vision goggles (NVG), crashes while egressing the target. The mishap pilot's (MP) NVG lookback was 0/2.1/5.5 hours in the past 30/60/90 days, respectfully. Ironically, the MP was current in NVG operations. The mishap investigation board concluded that the MP lacked proficiency due to limited NVG experience, a recent long layoff, and a challenging mission profile.

Stop! Don't think this is just another issue for the aircraft drivers and turn the page. No matter what your specialty, proficiency is an important variable in the human performance equation. Think back to the last time you read a mishap or incident report that involved your job. Even though mishaps are typically caused by several factors, there is one term that seems to find itself in every mishap report — proficiency. Proficiency, or lack thereof, is often not only questioned, but many times listed as cause in the incident.

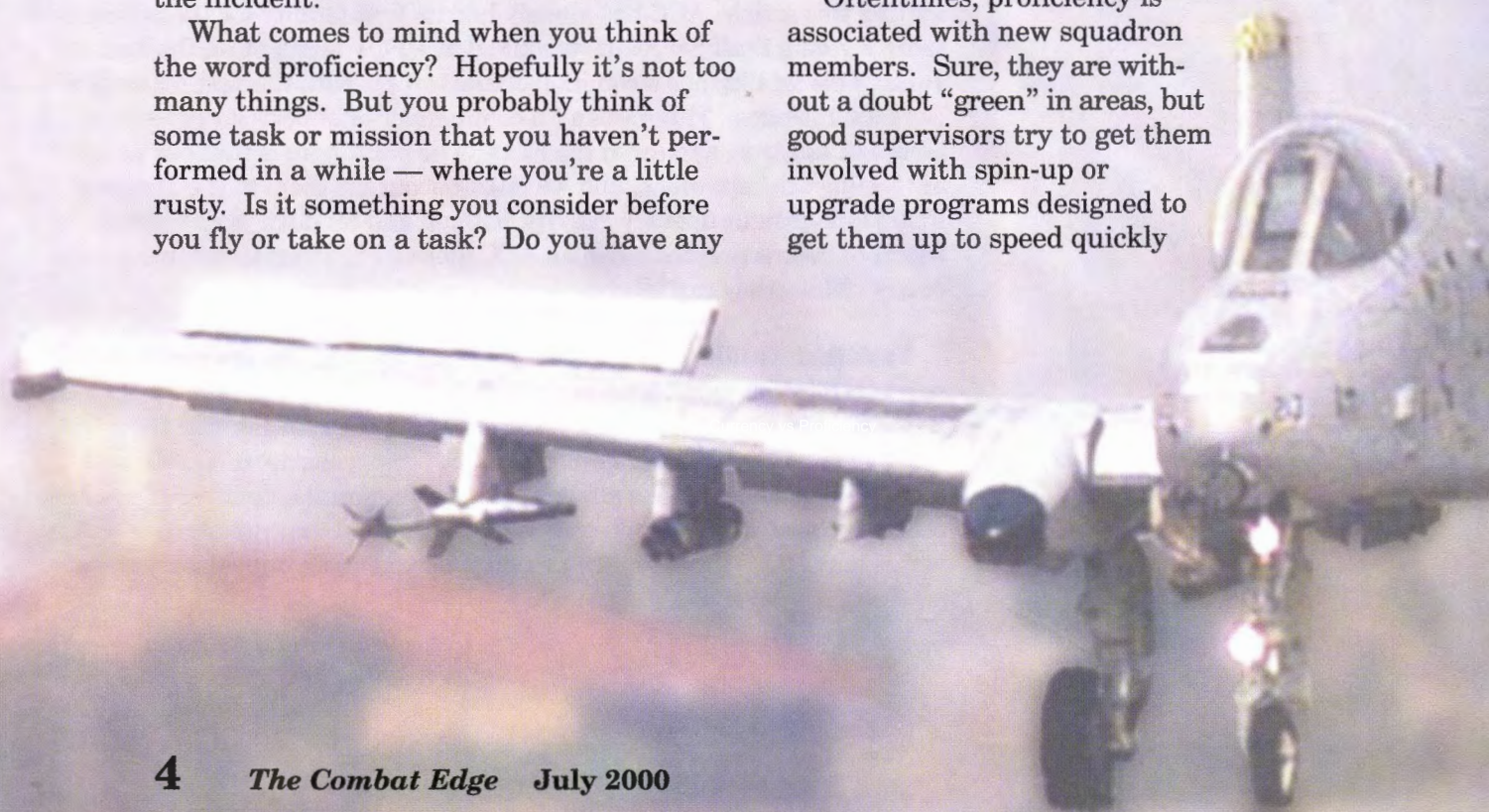
What comes to mind when you think of the word proficiency? Hopefully it's not too many things. But you probably think of some task or mission that you haven't performed in a while — where you're a little rusty. Is it something you consider before you fly or take on a task? Do you have any

concerns? What about your crewmembers or co-workers?

Think about a task you recently performed even though you had concerns about completing it correctly. You may have thought, "Why should I worry, I've been doing this job for many years and my clue bag is full." Most of the time we're not sure if proficiency is an issue or if there are concerns, because we're confident that our experience will fill in any holes. As military members, we tend to embellish situations, and if there are questions, say, "I'll deal with it when I get there." By that time, it's too late.

Who is really at risk here? Is it the young guy straight from technical school or replacement training unit? How about the airman who is fully qualified and has been around for a couple of years? What about the old graybeard who's got more time than you've got? You will get a different answer from everyone. In other words, they are all at risk.

Oftentimes, proficiency is associated with new squadron members. Sure, they are without a doubt "green" in areas, but good supervisors try to get them involved with spin-up or upgrade programs designed to get them up to speed quickly





# A Personal Responsibility

while making them competent at their jobs (i.e., lots of practice). Their saving grace is often that their supervisors are aware of this weakness and are careful not to saturate them with tasks — hopefully.

Rarely are there any concerns about the experienced personnel — the 5- and 7-level NCOs or the crewmember who has done a few tours. The fact is that these folks may be at a higher risk than the new airmen. As the more experienced personnel move up the ranks, they are pulled to the desk jobs. Depending on the specialty, many want to keep the cobwebs off their skills for the proverbial future civilian job. So in order to stay sharp, they continue to work in the “trenches” when they can. This can be a problem — experienced, yet non-proficient personnel.

The problem with experienced personnel is that they become very familiar with a task, and familiarity can breed complacency. Complacency (a.k.a. boredom, inattention), another term often mentioned in mishap reports, is when you don't give a task the attention it requires — like that old cliché,

“been there, done that,  
got the tee shirt.”

When this attitude occurs, it's a good possibility that your

confidence exceeds your proficiency — a mishap waiting to happen.

For many years, the military has tried to fix the proficiency dilemma by giving currency guidelines, but many of us have learned that you can be current without being proficient. Most tasks have no currency. If this is the case, the responsibility is completely yours.

Proficiency can have many variables: time, type of task, and the person. One or any combination of the three can degrade proficiency. They all interrelate.

High ops-tempo is usually associated with deployments and there seems to be an inverse relationship between operations tempo and proficiency (i.e., if one is up, the other is down). If you are gone a lot, then it is very difficult to stay sharp in all the areas for which you are responsible. Granted, you will get pretty good at doing a few tasks, but there simply isn't time for the others.

So now for the important part! How can you mitigate this threat? One way is to speak up before the required task/mission is performed (e.g., mission planning, pre-brief). This makes others aware of possible concerns you have and opens the door for critiques. Since proficiency is subjective, it is ultimately your responsibility to ensure you are ready for the task/mission. Remember that regulations determine your currency, but not your proficiency. ■

*By Capt. Randy McCalip  
20th ADOS, Shaw AFB, S.C.*





# Weapons Safety Managers – a difficult job in the best of times!

*By Lt. Col. Bruno Eddy  
ACC Weapons Safety, Langley AFB, Va.*

or current or previous weapons safety managers (WSMs), the following discussion will probably hit pretty close to home. For those who feel that they have been victims of numerous “weapons safety roadblocks” in executing their operations, this article will hopefully provide some insight into weapons safety and the dedicated NCOs that serve as WSMs, and work diligently to support their wing’s mission.

**F**irst, the weapons safety manager needs to be properly introduced into this discussion. WSMs are typically the rank of Staff Sgt. through Master Sgt., and

primarily come to this function from the 2W0 or 2W1 AFSCs. However, some 2M0s, 2W2s and civilians also serve as WSMs at selected locations. These NCOs come into the Weapons Safety job for a period of approximately two years, and must receive formal training through a 7-week AETC Weapons Safety Course. ACC WSMs receive an additional one-week Program Management Course. It normally takes the WSM approximately nine months to a year before they have the experience and knowledge to be an effective Weapons Safety Advisor. One that is capable of developing an explosive site plan (ESP) and providing



a comprehensive risk assessment of explosive operations. Within ACC, typically half of the unit-level WSMs have less than one year experience in Weapons Safety duties. Unfortunately, having these NCOs performing duties other than those of their primary AFSC could be detrimental to career progression, so we live with a constant turnover of personnel.

Secondly, DoD explosive safety guidance is promulgated by the Air Force Safety Center (AFSC) in AFMAN 91-201, "Explosive Safety Standards." It is a very complex set of rules and guidance that the WSM must interpret and apply to an ever-changing operational environment. Using these criteria to manually develop ESPs is a time-consuming process. It can include evaluating hundreds or thousands of relationships between an explosive site or operation and potential exposures which may be hazarded by those locations or operations. The goal in applying explosive safety quantity distance criteria is to provide maximum protection to resources (people, facilities, and aircraft) that are both directly and indirectly "related" to explosive operations. Application of these complex criteria is challenging enough in a stable environment. In a deployment situation where the beddown of forces is constantly changing, it can be an overwhelming task for these NCOs. These two factors combined, lack of experienced personnel and complex standards to follow, make for a very challenging job.

To assist our WSMs, the AF has developed, in conjunction with a Government contractor, an automated ESP tool called Assessment System for Hazard Surveys (ASHS). This software allows a WSM to import a digitized base map and facility database of a wing and manipulate the software under different scenarios to assist in the development of an explosive site plan in minutes versus hours or days. During Operation Noble Anvil, HQ USAFE Weapons Safety Managers used ASHS to provide Operational Commanders and HQ USAFE senior leaders with Operational Risk Management assessments for the operational beddown of forces in the European theater. The use of this software allowed the WSMs on the ground to provide timely and accurate assessments of resources that were hazarded by explosive storage facilities, operations, and alert loaded aircraft. In addition, the HQ

USAFE Weapons Safety staff initiated a Combat Mission Needs Statement (CMNS) for the development of a capability to integrate satellite imagery into ASHS. This CMNS requirement resulted in a modification to the ASHS software. It now provides the capability of performing initial beddown decisions on explosive risks associated with locations where no maps or site survey documentation exists. This capability has great potential to expand its benefit to other agencies and integrate with other databases or software for comprehensive deployment planning. Automation of ESPs is still in its infancy and has only recently been approved for AF-wide use. Current challenges include upgrading the software for use with other on-going automation efforts and integrating the training for this automation into a formalized program.

The complexity and impact of the explosive safety process has never been totally appreciated. For years I've viewed it as a job to be avoided, a place the weapons community put the individuals who couldn't hack it on the flight line or in the Munitions Storage Area — what a mistake! I now have a better understanding and a greater appreciation for what a challenging task it is to be the wing commander's key weapons safety advisor. The role of the WSM is a high demand, low density function — with an increasing demand for their expertise and constant turnover of personnel, supporting AEF deployments, Flag exercises and other taskings. This situation has put a severe strain on this function and made it difficult to recruit future WSMs. It is this very reason we need to send some of our best folks to perform this job. Believe me, I'm well acquainted with these NCOs — I know they will do their best to support the wing mission while keeping everyone as safe as possible. ■

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**Author Note:** *As I end a 30-year Air Force career as Headquarters Air Combat Command's Chief of Weapons Safety, I'm thankful that I had the opportunity to serve in this challenging job. This article was written out of respect for all the weapons safety managers I've worked with, who have done a stellar job in trying to interpret complex criteria and support Air Force operations, often under difficult circumstances. Keep up the good work!*







# BOATING UNDER THE INFLUENCE

*Courtesy of the U.S. Coast Guard,  
Office of Boating Safety*

## **Boating under the influence (BUI) of alcohol is illegal.**

That said, while 76 million people enjoy boating on America's waterways each year, many are not aware of the very real, life-threatening dangers associated with consuming alcohol and boating. To help reduce the incidents of BUI, the United States Coast Guard (USCG) has initiated a major, nationwide campaign to warn Americans about the dangers of alcohol consumption and boating.

## **Liquor is Quicker on the Water**

Alcohol, with its well-known ability to impair performance, creates an even more hazardous situation when added to the stress of the marine environment. This is because the marine environment - the fluid base, motion, vibration, engine noise, and elements of sun, wind, and spray - accelerates impairment. The operator's coordination, judgment, and reaction time are reduced by fatigue caused by these stressors. Tests have proven that only one-third of the amount of alcohol that makes a person legally impaired on the road is enough to make a person equally impaired on the water.

Further, alcohol can be more treacherous for boaters since they are less experienced and less confident on the water than on the highway. Recreational boaters do not have the advantage of experiencing daily operation of a boat. In fact, boaters average only about 110 hours of boating in a whole year. And in areas with seasonal boating, there can be months between boating outings or fishing trips.

## **Effects of Alcohol Consumption**

Add boating stressors to those usual factors resulting from drinking alcohol, and a truly perilous condition is present. Drinking alcohol produces certain physiological responses that directly affect safety and well-being.

- Judgment and skills deteriorate, affecting peripheral vision, balance, and ability to process information.

- Physical performance and reaction time are reduced.

- Alcohol reduces depth perception, night vision, focus, and the ability to distinguish colors, especially red and green.

- Alcohol consumption can result in inner ear disturbance, which can make it impossible for a person suddenly immersed in water to distinguish up from down.

- Alcohol creates a sense of warmth and may prevent a person in cold water from getting out before hypothermia sets in.

## **Boating Under the Influence is Illegal Nationwide**

It is unlawful in every State to operate a boat while under the influence of alcohol or drugs. In addition to State BUI laws, there is also a Federal law, enforced by the Coast Guard, prohibiting BUI. This law applies to all boats, including foreign vessels, in U.S. waters and U.S. vessels on the high seas.



### **Penalties for BUI are Severe**

The Coast Guard and every State have stringent penalties for violation of BUI laws, including the possibility of not only a large fine, suspension or revocation of operator privileges, but perhaps a jail term. The Coast Guard and the States, in a mutual effort to remove impaired boat operators from the water, cooperate fully. In sole State waters, States have authority to enforce their own boating-while-intoxicated statutes.

Within State waters that are also subject to the jurisdiction of the U.S., there is concurrent jurisdiction. If, in these waters, a boater is apprehended under Federal law, the Coast Guard will, unless precluded by State law, request that State enforcement officers assume custody of an intoxicated boater.

### **What Will Happen to the Impaired Operator?**

When the Coast Guard determines that an operator is impaired, the voyage will be terminated. The vessel will be brought to mooring either by Coast Guard tow, a member of the Coast Guard crew, or a competent, non-intoxicated person on board of the recreational vessel. Depending on the circumstances, the operator may then be arrested, detained until sober, or turned over to State or local authorities.

### **Threefold Approach**

Because operating a boat under the influence is so dangerous, the Coast Guard is using a threefold approach to reducing alcohol related accidents:

1. Improved law enforcement in cooperation with the States.
2. An improved accident reporting system to identify alcohol-related accidents.
3. Widespread education and public awareness of the dangers of alcohol. Every boater, whether an operator or passenger, should cooperate in spreading this word.

### **Boating Safety Education**

Throughout the country each year, over 2,000 safe boating courses are offered by groups such as the U.S. Coast Guard Auxiliary, the U.S. Power Squadrons, the American Red Cross, and individual States. Courses cover many aspects of boating safety - from boat handling to reading the weather. All courses include knowledge and warning about alcohol and boating. For more information on finding a course near you that will fit your schedule - call the toll-free U.S. Coast Guard Infoline at 1-800-368-5647 or view Boating Safety Courses on our Web site.

*[www.uscgboating.org](http://www.uscgboating.org)*

### **Suggested Ways to Avoid the Hazards of Alcohol**

Boating doesn't need any stimulus to make it fun. Fishing doesn't need any liquid bait to improve the catch.

Consider these alternatives to alcohol and boating:

- Take along a variety of sodas, a jug of water, ice tea, or lemonade, or take along non-alcoholic beer.
- Take along plenty of food.
- Wear clothes that will keep you cool.
- Plan to limit your trip to the number of hours you can spend on the water without becoming tired.
- Enjoy your outing more by having the party ashore after you dock - in the picnic area, in the Yacht Club, in your backyard - where you'll have time between the fun and getting back into a boat or your car.
- If you dock somewhere for lunch or dinner and drink alcohol, wait a reasonable time before heading back home.
- If necessary, be sure to have a sober designated driver as the boat operator. Or better yet, in case of emergency, have two designated non-drinking operators.
- No alcohol aboard is the safe way to go - remember that intoxicated passengers can fall overboard, too. ■





**M**ost of us hear the word safety, and the first thing that comes to mind is “here’s another lecture about following rules.” The words “be safe” and “have a safe trip” are so commonplace for some, they only see it as a kind or polite gesture and fail to understand the real meaning. The fact is, practicing safety saves millions or even billions of lives all over the world each year.

Do we need safety precautions or guidelines to assist us in those mundane tasks of our everyday lives, such as tying our shoes? In most cases, probably not. However, when it comes to our job, the risks are generally much higher. At work, we are influenced by many other variables such as physical and psychological limitations, attitudes and perceptions. We are only human, and no matter how educated we are, we still do unsafe (stupid) things. We even have those invincible thoughts, “I’m not going to get hurt” or “I can do this,” and many times we seem to be right.

I’d like to talk about the times when we were wrong about safety, like the time you changed a light bulb using a chair with wheels as a ladder and fell... but, by pure luck you only received a scrape on your arm. Although you were not seriously hurt that time, you knew the injuries could have been a lot worse. You could have easily broken your neck and became paralyzed for the rest of your life. Your experience of falling off that chair is now the best tool you can use to prevent that mishap

from happening again. If you share this experience with others, it might prevent them from making that same mistake.

As safety professionals, we investigate and produce reports about mishaps and their tragic results all the time. We also share mishap experiences through reports, articles, briefings, and statistics. Based on the lessons learned, we use this information to help develop sound safety guidance that will assist commanders, managers, and supervisors in maintaining safe operations at all levels. This is done by creating and disseminating written guidance (e.g., AFIs, AFOSH STDs and other safety regulations) to instruct us on the safest way to go about doing our jobs. Commanders, managers, and supervisors are key in making this guidance available and enforced. Of course, the responsibility of following good safety practices ultimately falls on the individual, YOU.

Most safety guidance is based on the fact that someone at sometime was injured or killed needlessly. Then, to keep it from reoccurring, proactive measures were taken to identify, control, and eliminate the hazards that led up to those mishaps. That’s all part of our job. We constantly work to ensure your safety, on and off duty.

Remember... *Safety is what safety does* — and that’s “saving lives.” ■

*By Tech. Sgt Anthony Stennis,  
ACC Ground Safety, Langley AFB, Va.*



# HURRICANE!

## Part 1

*From Talking About Disaster: Guide for Standard Messages  
Produced by the National Disaster Education Coalition  
Washington, D.C.*

**W**hy talk about hurricanes?  
There are no other storms on Earth like hurricanes. Views of hurricanes from satellites located thousands of miles above the Earth show how these powerful, tightly coiled weather systems are unique. Each year, on average, 10 tropical storms (of which six become hurricanes) develop over the Atlantic Ocean, Caribbean Sea, or Gulf of Mexico. Many of these storms remain over the ocean. However, an average of five hurricanes strike the United States coastline every three years. Of these five, two will be major hurricanes, which are storms of category 3 (winds at or above 111 miles per hour) or higher on the Saffir-Simpson scale.

Timely warnings have greatly diminished hurricane fatalities in the United States. In spite of this, property damage continues to mount. There is little we can do about the hurricanes themselves. However, the National Oceanic and Atmospheric Administration's (NOAA's) Tropical Predic-

tion Center and National Weather Service (NWS) field offices team up with other federal, state, and local agencies; rescue and relief organizations; the private sector; and the news media in a huge warning and preparedness effort.

### **What are hurricanes, and what causes them?**

Hurricanes and tropical storms are cyclones with tropical origins (tropical cyclones). When the winds of a tropical storm (winds 39 to 73 miles per hour) reach a constant speed of 74 miles per hour or more, it is called a hurricane. Hurricane winds blow in a large spiral

around a relatively calm center known as the "eye." The "eye" is generally 20 to 30 miles wide, and the storm may have a diameter of 400 miles across. The center, or eye, of a hurricane is relatively calm. The most violent activity takes place in the area immediately around the eye called the eyewall. At the top of the eyewall (about 50,000 feet), most of the air is propelled outward, increas-

**An average of five hurricanes strikes the United States coastline every three years. Of these five, two will be major hurricanes...**



ing the air's upward motion. Some of the air, however, moves inward and sinks into the eye, creating a cloud-free area. As a hurricane approaches, the skies will begin to darken and winds will grow in strength. A hurricane can bring torrential rains, high winds, and storm surge as it nears land. A single hurricane can last more than two weeks over open waters and can run a path along the entire length of the eastern seaboard.

More dangerous than the high winds of a hurricane is the storm surge – a dome of ocean water that can be 20 feet high at its peak and 50 to 100 miles wide. The surge can devastate coastal communities as it sweeps ashore. In recent years, the fatalities associated with storm surge have been greatly reduced as a result of better warning and preparedness within coastal communities.

Most deaths due to tropical cyclones are flood-related. Inland flooding is a common occurrence with hurricanes and tropical storms. Torrential rains from decaying hurricanes and tropical storms can produce extensive urban and river flooding. Winds from these storms located offshore can drive ocean water up the mouth of rivers, compounding the severity of inland flooding. Inland streams and rivers can flood and trigger landslides. Mudslides can occur in mountainous regions. In addition, hurricanes can spawn tornadoes, which add to the destructiveness of the storm.

Learn about hurricane risk in your community by contacting your local emergency management office, National Weather Service office, or American Red Cross chapter.

#### **Plan for a Hurricane**

- Learn about your community's risk from hurricanes. Contact your local emergency management office, local National Weather Service office, or local chapter of the American Red Cross for more information on hurricanes and how to prepare for them.

- If your community is at risk from hurricanes, contact the local emergency management office or planning and zoning office to find out if you live in an area that could flood during a hurricane or heavy rains. If you live

in a risk area, learn what types of supplies should be on hand to protect your home from floodwaters. Knowing the elevation of your property in relation to nearby streams and dams will let you know if forecasted flood levels will affect your home.

#### **If you are at risk from hurricanes:**

- Talk to your insurance agent.

Homeowners' policies do not cover flooding from hurricanes. Ask about the National Flood Insurance Program (NFIP).

- Ask about your community's hurricane preparedness plan. The local emergency management office or local chapter of the American Red Cross should be able to provide you with details of this plan, including information on the safest evacuation routes, nearby shelters, advice on when schools would be closed, and what conditions are necessary for recommended evacuation of certain areas.

- Develop an evacuation plan. Everyone in your family should know where to go if they have to leave. Trying to make plans at the last minute can be upsetting and create confusion.

- Determine where to move your boat in an emergency. Marinas and other storage facilities may fill up quickly. Some locations may have less risk of damage than others may. You may be required to secure your boat well in advance of approaching hurricanes.

- Discuss hurricanes with your family. Everyone should know what to do in case all family members are not together. Discussing hurricanes ahead of time will help reduce fear and anxiety, and lets everyone know how to respond. Review flood safety and preparedness measures with your family. ■

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**Editor's Note:** Hurricane season starts 15 May and ends 30 November. While not all inclusive, the information we presented in this article is provided as an awareness tool. "Stay tuned" to future issues for information on *How to Assemble a Disaster Supplies Kit, How to Protect Your Property, What to Do During a Hurricane Watch and WARNING, and What to Do After a Hurricane.*



# Water-skiing for Fun!

*Courtesy of the U.S. Coast Guard,  
Office of Boating Safety*

**W**ater-skiing is an exciting and challenging sport. However, like all "fast-action" sports that are fun, it does possess an element of risk.

*Many skiers and boaters are not aware of the potential hazards of water-skiing and, as a result, are hurt or even killed pursuing this recreational sport. Attention to hazards in the area where you are skiing is especially critical due to the ever-growing number of boats out on the water.*



### The Ski Area

The size of the water area in which you intend to ski determines the number of boats and skiers that can operate within it at the same time. Each boat should be able to maintain a 200-foot wide "ski corridor" (100 feet on either side of the boat). The entire "skiing course" should be at least 2,000-3,000 feet long to avoid constant turning and risky maneuvering.

A minimum depth of five to six feet of obstacle-free water is suggested for safe skiing to:

- Keep the skis from dragging bottom during starts.
- Allow for a margin of safety against hitting bottom or submerged obstacles during a fall. Serious injuries can result from hitting fixed objects such as docks, pilings or stumps. While warning buoys or signs mark many areas with obstacles, it is up to the boat operator, observer and skier to be alert to any potential hazards in the skiing area.

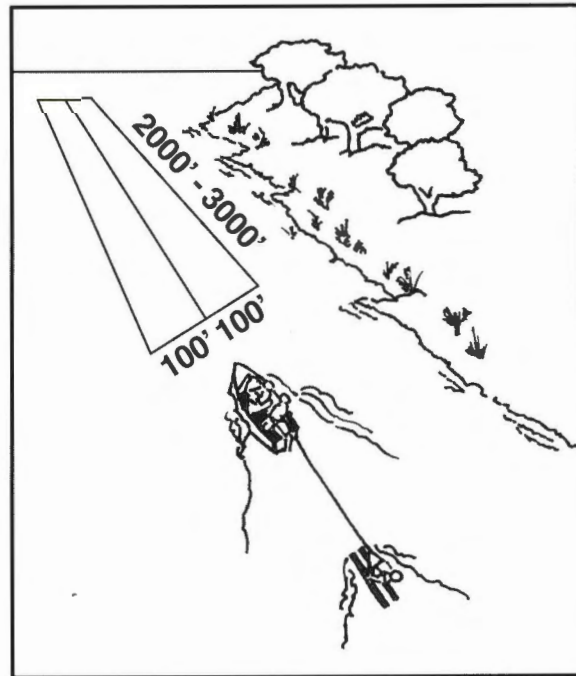
### Weather

As a rule, avoid skiing when the water is rough due to high winds. Choppy water demands a greater skill level and causes the skier to fatigue more quickly, often because the tow boat cannot maintain a constant speed. Skiing in the rain is not recommended because of the loss of visibility experienced by the boat operator.

When skiing in cooler weather, be aware of the effects of hypothermia. Loss of body heat leads to a reduction in coordination and judgment. The use of wet suits is an effective way to ward off the chilling effects of wind and cold water.

### Safety Tips For Water-Skiers

Don't take unnecessary risks while water-skiing. The following tips will help



you safely enjoy this thrilling sport:

- ALWAYS have an observer in the boat. This is a legal requirement in many states. The boat driver cannot watch the skier and operate the boat safely at the same time.
- ALWAYS wear a Coast Guard-approved personal flotation device (PFD) designed for water skiing. Ski belts are NOT recommended. Your approved PFD will help keep you afloat.
- Don't ski in rough water. High waves or a choppy sea will prevent the towboat from maintaining a steady course and speed.
- Stay well clear of congested areas and obstructions. Water-skiing requires a lot of open area.
- Don't spray or "buzz" swimmers, boats or other skiers. Such stunts are dangerous, discourteous and could cause an unintentional collision.
- NEVER ski after dark. It is hazardous AND illegal. Any boat traveling fast



enough to tow a skier is traveling too fast to navigate safely at night.

- NEVER water-ski while under the influence of alcohol or drugs. Such activity is extremely dangerous because of the impairment to your judgment and ability to respond. A recent study conducted with expert skiers who were deliberately intoxicated indicated that even their ability to ski was dramatically reduced.

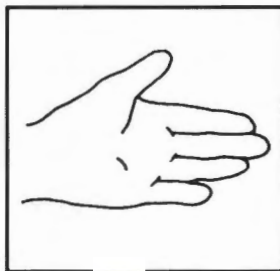
- Use hand signals between the skier and observer. Agree before you start what each signal means so there is no confusion at a critical moment.

Keep away from:  
Crowded Beaches -  
Docks - Swimming Areas - Rocks -  
Bridge Pilings.

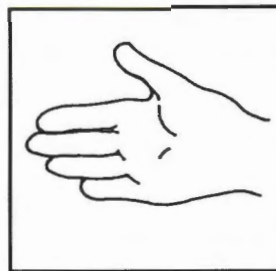
### Retrieving a Skier

Falling down in the water while water-skiing is a common occurrence, especially for beginners. If a skier has fallen or made a water landing, pick them up as soon as possible, since floating skiers are difficult for other boats to see. While waiting to be picked up, the skier should hold up a ski to increase their chances of being recognized in the water.

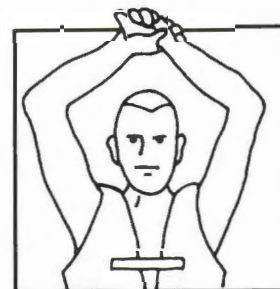
The boat operator reduces speed immediately while the observer maintains visual contact with the skier and directs the operator. Return to pick up the fallen skier with the boat at reduced speed and headed into the wind or current, which-



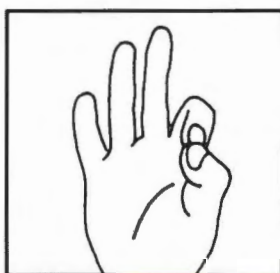
Turn Left



Turn Right



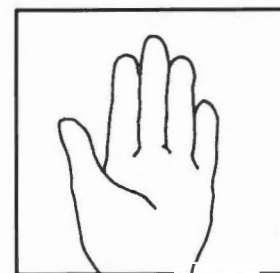
OK



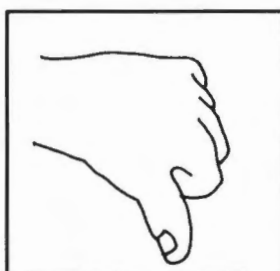
Speed OK



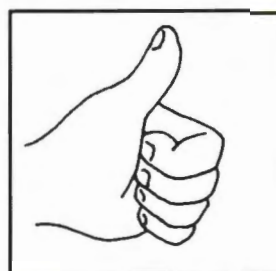
Back to Dock



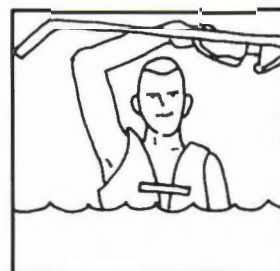
Stop



Slower



Faster



Retrieval

ever is stronger. Always turn off the engine when approaching the skier.

The observer is to watch for the skier's signal to indicate the skier is all right. If the signal is not seen, the operator must assume the skier is injured and needs immediate assistance. If the skier is injured but is able to grasp and hold a line, maneuver the boat upwind and close to the injured person. Turn off the engine, throw the injured skier a line and gently haul them in.

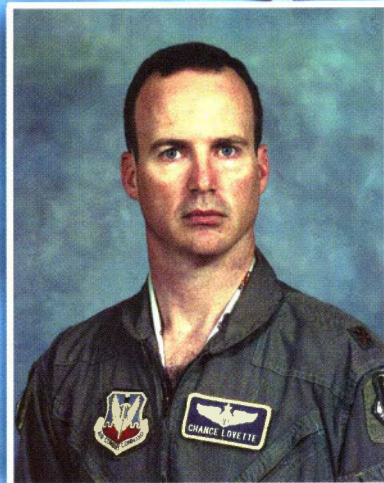
If they cannot grasp and hold a line, follow the same procedure, but let the boat drift towards them without power. Always keep the operator's side toward the victim and NEVER retrieve anyone from the water with the engine running. Put a swimmer in the water to retrieve a skier only as a last resort. ■



# FLIGHT SAFETY AWARD OF THE QUARTER

*Maj. T. Chance Lovette  
33rd Fighter Wing, Eglin AFB, Fla.*

Maj. Lovette is one of ACC's leading flight safety officers (FSO). Responsible for mishap prevention for the 33rd FW's 54 aircraft and 12,000 annual flying hour program, he has made significant and lasting contributions. Maj. Lovette revamped a safety program in turmoil, due to high operations tempo, personnel turnover, and an aging airframe. New in the 33 FW Flight Safety position, he was personally responsible for conducting and coordinating investigations for 2 Class B, 2 Class C, and 9 Class E/J events addressing damage in excess of \$2.5 million. To focus the entire wing on mishap prevention in the new year, Maj. Lovette spearheaded 33 FW Safety Day, 3 Jan 00, supporting the Air Force Safety Center's "January Challenge," coordinating and scheduling an interactive program to brief over 1,000 personnel. A talented author and top-notch communicator, he completely revised and taught both the Safety Investigation Board (SIB) and Flight Safety Officer (FSO) courses in less than two weeks!



Maj. Lovette's aggressive attitude and drive was put to the test when he was assigned as board president and investigating officer for a tailored Class B SIB. His phenomenal leadership and motivation of a board consisting of only three members led to recommendations with impact across the Combat Air Forces (CAF). On no-notice and while still tasked with demanding FSO duties, Maj. Lovette assumed the role normally delegated to a full SIB, investigating a landing gear mishap that very nearly caused the loss of a \$36 million aircraft and a pilot's life. When presented with an inconclusive engineering analysis, Maj. Lovette orchestrated a dramatic, hands-on reconstruction of the incident, establishing, without doubt, the cause and prompting the F-15 System Program Office to issue a worldwide urgent Time Compliance Technical Order (TCTO), undoubtedly preventing a number of mishaps CAF-wide.

Under his leadership, 33 FW Safety was the first to identify an F-15 main landing gear uplock bracket deficiency. On 54 aircraft, 17 brackets were found cracked, prompting a high accident potential message to the CAF and ultimately a three-phase TCTO, once again averting catastrophic mishaps worldwide. Always focusing on solutions vice problems, Maj. Lovette also identified deficiencies in landing gear servicing, personally briefed maintenance supervision, and initiated corrective action. Result: deficiency rate improved from 50 percent of the fleet to near zero in less than 72 hours.

Maj. Lovette continues to have an immense wing-wide impact. His efforts are not limited to mishap investigation and prevention alone. On his own initiative and on his own time, he personally developed an innovative, automated Operational Risk Management (ORM) analysis tool, incorporating "point and click" access to a risk decision matrix and links to all applicable documentation and guidance. Immediately adopted by the fighter squadrons, supervisors of flying, and lauded by the 33 FW and 33 OG Commanders, it is now resident on the desktops of all key 33 FW leadership. He has set the standard for all to follow.



# WEAPONS SAFETY AWARD OF THE QUARTER



*Staff Sgt. James C. Dean  
99th Security Forces Squadron, 99th Air Base Wing  
Nellis AFB, Nev.*

Sgt. Dean developed and implemented strict weapons barrment guidelines to ensure unauthorized personnel could not receive or handle weapons or ammunition while on the barrment list. The new process directs on-duty armorers to follow and sign a simple, step-by-step checklist when barring personnel from their weapons. First, armorers post a letter barring personnel from their weapons in the barred book. Secondly, the name is then added to the status board that alerts on-coming armorers of any changes made to the barrment book. Next, the staff will secure the assigned weapons of barred personnel to the weapons rack with wire, and assigned ammunition is secured with red tape for easy identification. Finally, a red cap is placed over the muzzle as an extra reminder not to issue that particular weapon. This process was validated by zero errors in

weapons issues this quarter and commended as an excellent practice by Joint Nuclear Surety Inspection (JNSI) Inspectors.

Sgt. Dean served as the 99 SFS Additional Duty Weapons Safety Manager (ADWSM), which required him to monitor, guide, and train four security forces armories and seven security forces offices on weapons safety, ammunition accountability and weapons capability. These armories and offices are required to handle explosives on a daily basis, and due to Sgt. Dean's superb management of the explosive safety program, the units kept unmarred safety records of no errors.

Sgt. Dean coordinated and supervised all force-on-force exercises/training for 350 personnel. He ensured arming safety guidelines were met, conducted 100 percent inspections of all exercise ammunition, ensuring live rounds were not issued, and he reinforced issue compliance with smoke grenades, ground burst simulators, and simulated hand grenades. His attention to detail and safety instruction led to numerous successful training exercises, without injury to any personnel or trainees! He personally issued live ammunition to a 17-man back-up force during an emergency response to a real-world situation at one of the biggest above ground munitions storage areas in the free world. His emphasis on safety was paramount to safeguarding Air Force assets without incident.

He personally supervised and coordinated "smoke and bang" training for 350 personnel, updating their certifications on handling, carrying and throwing smoke grenades, ground burst simulators, and simulator hand grenades. His detailed course of instruction ended with zero incidents or injuries! His "excellent" rating during the JNSI armory/weapons in-depth inspection mirrored his reputation for safe armory standards, with zero incidents or accidents in explosives handling this quarter.

During his January fire department inspection, his fire safety and explosive safety compliance was rated as "outstanding," with zero errors or discrepancies. Sgt. Dean has managed to have zero write-ups or negative findings, despite the fact that his armory undergoes numerous inspections and runs a 24-hour service where explosives and weapons are used as the tools for the Security Forces trade.



# GROUND SAFETY AWARD OF THE QUARTER

*Staff Sgt. Justin W. Barnes*

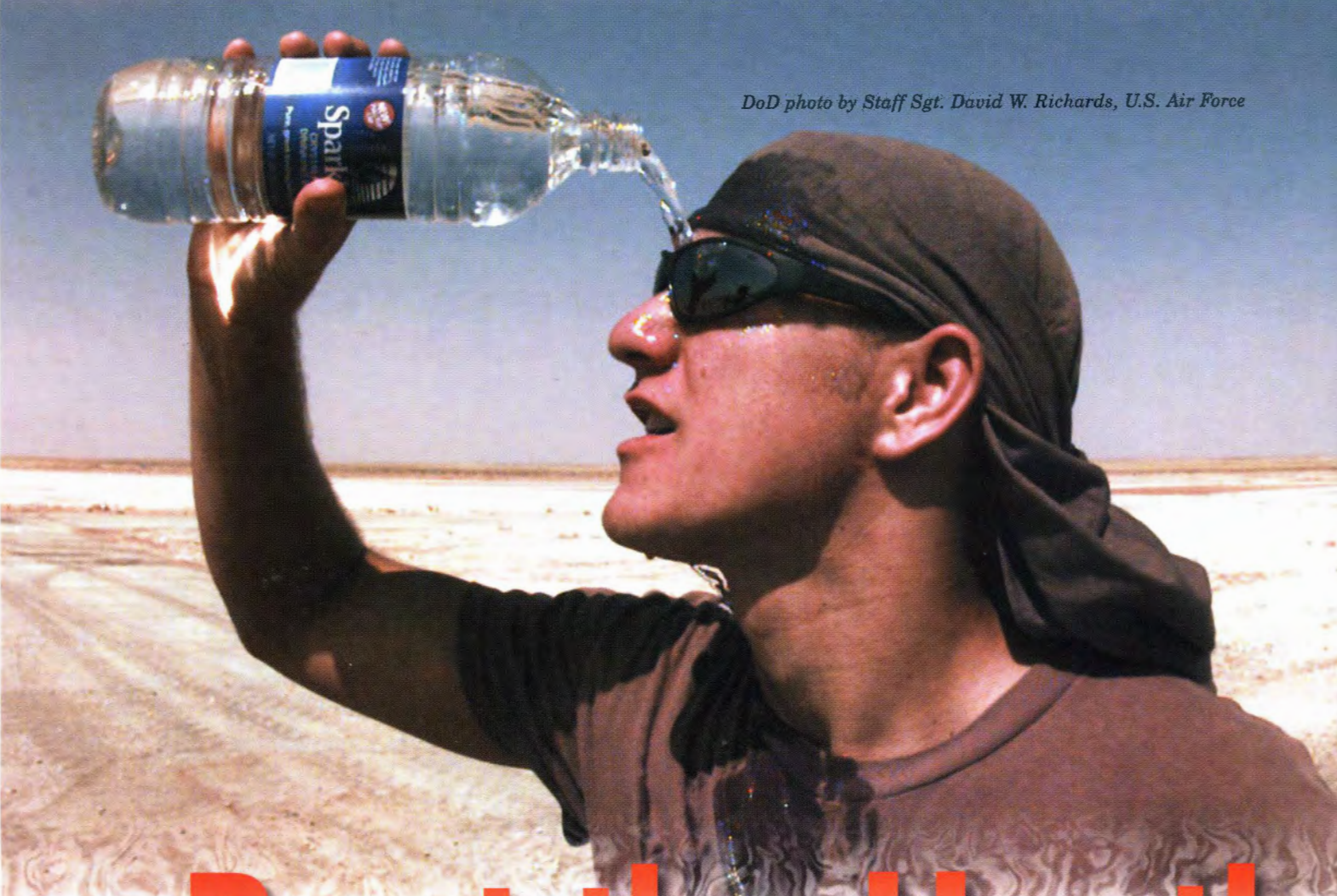
*3rd Combat Communications Support Squadron, 3rd Combat Communications Group  
Tinker AFB, Okla.*

As 3rd Combat Support Squadron's Unit Safety Representative, Sgt. Barnes' diligence and attention to detail significantly advanced the squadron's mishap prevention program. Sgt. Barnes not only re-energized the safety program, but expertly mentored his flights' safety representatives by providing detailed information and training to correct deficiencies in the squadron's job safety training program, spot inspection program, and safety publicity campaign.

Sgt. Barnes' efforts to revamp the squadron's safety publicity campaign ensured monthly safety briefings pertaining to seat belt awareness, drinking and driving, and other pertinent safety information, and has created a culture of safety second to none. His keen attentiveness to his work environment allowed him to identify and correct several safety hazards, preventing injury to co-workers. Sgt. Barnes' impressive efforts were rewarded during the recent Air Combat Command Unit Compliance Inspection, when his squadron received zero discrepancies in the safety arena.

Sgt. Barnes' concern for his squadron enabled him to plan and implement a spring severe weather program to educate personnel on hazards common to the local area. He organized and facilitated a seminar featuring a local media personality, educated personnel on severe weather shelter locations both on and off base, and informed people what should be kept in a tornado survival kit. By sharing this life-saving information on Oklahoma's violent spring weather with both military and family members, he fostered an increased safety awareness that may prevent loss of life or personal injury. Furthermore, he spearheaded an effort to purchase 10 weather alert radios from the National Weather Service for all workcenters. These radios will ensure immediate notification of severe weather warnings, giving squadron personnel extra time to seek shelter.



A man wearing a black head covering and sunglasses is shown in profile, drinking from a clear plastic bottle of Spark water. He is in a desert environment with a clear blue sky and sandy ground. The bottle has a blue label with the word "Spark" visible.

*DoD photo by Staff Sgt. David W. Richards, U.S. Air Force*

# Beat the Heat!

*By Maj. (Dr.) Eric M. Chumbly  
59th Medical Wing, Lackland AFB, Texas*

**Air Force members all over the world are called upon to operate in a variety of strenuous conditions. In particular, many have to cope with heat on a daily basis. A variety of medical conditions may plague these folks, including exertional heat illnesses and overhydration.**



Understanding these problems and how to prevent them requires a knowledge of the body's way of regulating heat, water, and sodium balance. During heavy exercise, the human body can generate 10 to 20 times the amount of heat that it does at rest. Since only 20 percent of that heat is used to do work, the rest must be dissipated. That extra heat is transferred from the core of the body (mainly muscles) to the skin, where it can be released to the environment. Because heat transfer is accomplished by increasing blood flow to the skin, it is vital to keep up the blood volume, which means keeping up hydration. In addition, evaporation of sweat is the body's major mechanism for heat dissipation while exercising. Sweat is composed mainly of water, with a small amount of sodium. Dehydration therefore, clearly robs the body of its ability to cope with heat stress, and increases the risk of heat illness. In fact, a fluid loss of one percent of total body weight can increase the body's core temperature.

Common exertional heat illnesses include heat syncope, heat cramps, heat exhaustion, and heatstroke. Heat syncope usually refers to fainting that occurs at the end of some event (such as a difficult march or race) because of improper cool-down. It may also occur if individuals stand for prolonged periods in a hot environment without moving the legs. It is not dangerous, and is easily treated and easily prevented. Treatment is simple; lie down, elevate the legs, cool off in the shade, and drink cold fluids. Prevention is better; stay well hydrated and keep walking after exertion. Acclimatization, the body's process of becoming accustomed to working in the heat, is also important to prevent heat syncope. Heat cramps, heat exhaustion, and heatstroke are conditions of water and often sodium loss. Heat cramps represent the least dangerous of these conditions. They typically occur during or

after intense exercise in the heat and usually involve the legs. Sodium is lost in the sweat, and is further diluted in the blood if plain water is used to replace fluid losses. Heat cramps usually resolve with rest, cooling down, and massaging the affected muscles. Prevention involves acclimatization to heat and staying on top of fluid and salt status before exercising. The most important thing to note about heat cramps is that they may signal a worse heat illness. Heat exhaustion is more complex and more dangerous. Victims continue to sweat, become weak and lightheaded, and may become somewhat confused. Temperatures may range from slight elevation to a high fever, but not as high as with heatstroke, which may show temperatures of more than 104 degrees Fahrenheit. The problem is generally a combination of sodium and fluid loss in sweat without enough replacement. Treatment involves rest, cooling, and appropriate rehydration. Cases of heat exhaustion should be treated in a medical facility where sodium can be measured and fluid can be replaced at the right rate. Again, prevention involves acclimatization and good hydration practices. Heatstroke is a medical emergency in which the body's cooling mechanisms are overwhelmed. Dehydration and lack of acclimatization usually contribute. The appearance of a heatstroke patient ranges from moderate confusion to coma and a high body temperature. Victims almost always continue to sweat; many people believe that sweating has stopped in the case of heatstroke, but this is seldom true. Because heatstroke can rapidly progress to collapse of vital organ systems, these patients need immediate treatment in a medical facility. Treatment may be complex, based on initial temperatures and sodium balance, but always involves rapid cooling. Prevention is the same as the other exertional heat illnesses.



The flip side of dehydration is overhydration, or simply drinking too much water too quickly. When sodium is lost in sweat, and water is drunk as a replacement fluid, the sodium remaining in the blood can be diluted. Hyponatremia, or low blood sodium, generally happens after drinking too much plain water (over a quart and a half per hour) over several hours. Slightly low levels of sodium are fairly common in distance runners, and usually go unnoticed. However, the sodium level may become profoundly low in overhydration, and cause problems throughout the body. Because fluid balance is intimately tied to sodium, hyponatremia can lead to damage of certain kinds of tissues in the body. Changes are most noticeable in the nervous system, where seizures, coma, and even death can result. Recognizing overhydration is challenging because it may appear so much like exertional heat illnesses. Early symptoms are vague, and include confusion, nausea, fatigue, muscle cramps, and weakness. Worse cases can include vomiting, muscle twitching, delirium, seizures, and coma. Differentiation from heatstroke or heat exhaustion can be difficult, even for trained medics. The main point is that heatstroke, and frequently heat exhaustion, include a high temperature, whereas overhydration does not. The final diagnosis must be made at a medical facility, where appropriate treatment can occur. If all this talk about hydration and sodium balance sounds intimidating, relax. The American College of Sports Medicine recommends drinking about a half a quart two hours prior to exercise. A quart and a half is the absolute highest volume to drink per hour. The maximum amount to drink in a 24-hour period is 12 quarts. Remember that hydration is an ongoing process. Waiting until exercise has begun to begin drinking is a little like jumping

The flip side of dehydration is overhydration, or simply drinking too much water too quickly.

out of a plane and then thinking, “well, I really ought to put on a parachute.” It’s too late. Good hydration is indicated by urinating a full bladder four times a day, urine that is light yellow (unless using vitamin or mineral supplements, which can darken the urine), and lack of thirst during exertion. Deviation from these may mean that hydration is poor, and drinking should be increased. The best sodium level is maintained by eating a balanced diet, which contains plenty of salt for the majority of people. It is important not to skip meals during periods of intense activity, because the salt taken in both replaces the sodium lost in sweat and aids the absorption of water, thus making rehydration after exercise more effective. What is the best thing to drink? While water is usually

the right fluid for hydration, sports drinks containing sodium and carbohydrates should be used whenever doing heavy work for an hour or more in hot conditions.

The same applies if meals have not been or will not be eaten for four to six hours. Because sports drinks may taste better than plain water, they may be more likely to be consumed in proper amounts.

Exertional heat illnesses and overhydration remain a threat for anyone who must work in hot conditions, but they are very much preventable. These simple guidelines go a long way toward safe operations in the heat: Drink enough water throughout the day to cause the bladder to fill four times. Drink a full quart an hour (plus or minus a quarter quart) during heavy exercise in hot conditions, never more than a quart and a half an hour, and never more than 12 quarts a day. Do not skip meals if you can help it. Drink a sports drink whenever doing strenuous work in the heat for over an hour, or if unable to eat regular meals. And put on a parachute before exiting an airborne plane.









# Monthly Awards

## AIRCREW SAFETY AWARD OF DISTINCTION

*Capt. Wayne Kodama, Maj. Bruce E. O'Cain, Capt. Vincent G. Lappano, Capt. Edward K. Cantrell,  
Lt. Col. Mark J. Lewakowski, Master Sgt. Richard F. Boone, and Master Sgt. Steven E. Taylor  
964th Airborne Air Control Squadron, 552nd Air Control Wing  
Tinker AFB, Okla.*



The crew of Sentry-41 planned a 9.5-hour AWACS weapons control mission round robin from Tinker AFB to working areas off the US southeast coast. Mission activity included support for a 4th Fighter Wing Operational Readiness Evaluation (ORE) and control of Marine air assets from Cherry Point MCAS. The mission profile was planned to maximize weapons training activity and conduct air refueling to meet overhead fuel requirements for Tinker.

On the day of the mission, while orbiting near W-157, delays in weapons activity,

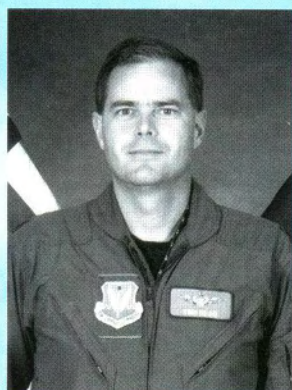
combined with unforecast deteriorating weather at Tinker, necessitated an ops stop at Charleston AFB, S.C. Once complete with weapons control activity, Sentry-41 landed uneventfully at Charleston AFB. Upon completion of the ops-stop, Sentry-41 departed Charleston, 13 hours into a 16-hour duty day with Maj. O'Cain performing the takeoff. Conditions at the time of departure were night, visual flight rules (VFR), with bird condition low. While passing through 700' AGL, the crew raised gear and flaps while maintaining runway heading. Just as the gear was fully retracted, Sentry-41 suffered multiple bird strikes to the numbers one and two engines, as well as flight control surfaces on the left side of the aircraft. Almost immediately, the RPM on engines one and two decreased approximately 30 percent, causing the aircraft to yaw left. Maj. O'Cain continued to fly the aircraft correcting for the uncommanded yaw, maintaining heading, and vertical velocity indicator (VVI). Approximately 5-10 seconds after decreasing in RPM, both engines regained takeoff power. With Maj. O'Cain flying the aircraft, Capt. Kodama declared an in-flight emergency and coordinated with Charleston approach for holding and clearance to 12,000 feet in order to conduct a controllability check. Upon completing the controllability check, Sentry-41 obtained clearance over water and adjusted gross weight in order to meet tech order landing gross weight limits. Upon reaching landing weight limits, the crew executed an uneventful diversion into Charleston AFB.

Post flight inspection of the E-3 revealed extensive damage to the fan sections of the numbers one and two engines, necessitating replacement of three sets of fan blades. The professional airmanship, effective implementation of risk management, and flawless crew coordination of the crew of Sentry-41 were instrumental for the safe recovery of a \$270 million national asset and the lives of the 31 crewmembers on board.



## PILOT SAFETY AWARD OF DISTINCTION

*Lt. Col. Thomas S. Dean  
357th Fighter Squadron, 355th Wing  
Davis-Monthan AFB, Ariz.*



Lt. Col. Dean's extraordinary airmanship, aircraft systems knowledge, and courage were instrumental in the safe recovery of a crippled A-10A Thunderbolt II when he was required to land with all landing gear retracted. Col. Dean was flying as a student on a low altitude surface attack tactical mission in the Barry Goldwater South Tactical Range complex, over 100 miles west of Davis-Monthan AFB. During a 500-foot above ground level (AGL) tactical strafe pass, a 30mm bullet malfunctioned and exploded inside the bullet feed area of his A-10's gatling gun, causing catastrophic internal and external damage. The aircraft immediately began to vibrate violently and Col. Dean instantly climbed away from the ground and called "Knock-It-Off." During the climb he noticed a "gun unsafe" warning light illuminated the airspeed indicator system reading only 50 knots.

The instructor pilot (IP) rejoined for a battle damage check and observed a panel beneath the nose of the aircraft jammed against the Pave Penny laser detection pod. There was no indication of engine or hydraulic damage. The mishap flight accomplished the "gun unsafe" and "aircraft controllability" checklists while orbiting the desolate range. During the course of the controllability check, Col. Dean attempted to lower the landing gear to obtain the final approach configuration, and they determined the nose landing gear was jammed in the fully retracted mode. The IP and student conferred with the Davis-Monthan AFB supervisor of flying (SOF) and decided to return to the wider and longer home base runway rather than divert to the austere, neighboring Gila Bend Airfield. The student retracted the main landing gear, jettisoned the remaining self-protection chaff and flares, and began the slow flight back to Tucson.

With sunset rapidly approaching, Col. Dean neared the final approach course to Davis-Monthan AFB and prepared to establish a landing configuration. Using his IP in a close chase position to relay his airspeed, Col. Dean went through every possible procedure to free the jammed nose gear, but to no avail. They then decided to retract the remaining gear and land gear-up.

The sun had already set as Col. Dean lined up on final and flew a flawless approach to the 13,500-foot runway. The aircraft settled on the inert TGM-65 Maverick missiles and empty triple ejector racks, sending up a shower of sparks seen for miles from the airfield. Due to the rugged nature of the aircraft, Col. Dean was still able to maintain heading control using a combination of rudder and differential braking on the retracted, yet partially extended, main landing gear. He shut down the engines and emergency egressed the aircraft, accomplishing the 100-meter dash in 9.3 seconds.

Col. Dean's superior airmanship and bravery made the safe recovery of the severely damaged A-10 possible, with damage limited to the aircraft suspension equipment and minor scrapes on the tail section.





## FLIGHT LINE SAFETY AWARD OF DISTINCTION

*Capt. Edward R. Corcoran  
60th Fighter Squadron, 33rd Fighter Wing  
Eglin AFB, Fla.*

On 26 Jan 00, Capt. Corcoran was the supervisor of flying when an F-15C experienced a left main landing gear failure during an attempted landing. When the pilot could not maintain directional control, he executed an afterburner go-around and directed his wingman to rejoin for a damage assessment. The pilot and chase pilot contacted Capt. Corcoran for help in assessing the situation and determining an appropriate course of action. Due to a low fuel state, critical decisions had to be made quickly to safely recover the aircraft.

Since checklist guidance is vastly different for the two possible stub main landing gear situations, Capt. Corcoran had to determine from the chase pilot exactly how much of the left main gear was left. With the chase pilot's detailed description of the damaged gear, Capt. Corcoran decided that the short stub checklist applied. After reviewing the checklist and reading the procedures to the pilot, Capt. Corcoran received word that the approach end cable for the active runway was severed during the first attempted landing, leaving only two arresting cables available — one downwind and one with a significant crosswind. With less than 10 minutes of fuel remaining, Capt. Corcoran analyzed the risks of the unfavorable winds and the faster approach speed required by the checklist. He immediately relayed this information and recommended the pilot land opposite direction with the tailwind. The pilot had just enough fuel to set up for the approach and performed a flawless two-point attitude cable engagement. Capt. Corcoran's poise under pressure and rapid decision making undoubtedly contributed to the safe recovery of the pilot and a \$37 million combat asset.



## CREW CHIEF SAFETY AWARD OF DISTINCTION

*Tech. Sgt. Michael R. Jaeger and Staff Sgt. Timothy A. Currey  
60th Fighter Squadron, 33rd Fighter Wing  
Eglin AFB, Fla.*

During the 33 FW Phase I Operational Readiness Exercise, Sgt. Jaeger and Sgt. Currey were assigned to perform maintenance on an F-15C aircraft when they noticed signs of exfoliation (a bubble in the paint) on the right main landing gear bungee assembly. Sgt. Currey removed the paint and discovered a dangerously corroded area. Sgt. Jaeger then called for a non-destructive inspection (NDI) of the bungee assembly to be performed. The NDI inspection revealed the interior of the bungee assembly cover was corroded completely through the outer cover wall.

This bungee assembly mechanism allows the gear to rotate in and out of the aircraft wheelwell. If the bungee fails, the gear will not rotate properly upon takeoff or landing. Gone undetected, a bungee failure can result in the landing gear locking in place and with the wheel-cocked 90 degrees to the direction of travel, with catastrophic implications. Concerned that other aircraft may have the problem developing, Sgt. Jaeger and Sgt. Currey decided to inspect other aircraft in the 60 FS and discovered several bungee assemblies with identical corrosion evident to varying degrees. Additionally, the Safety Investigation Board (SIB) investigating a Class B landing gear structural failure at Eglin AFB, in which the pilot narrowly escaped with his life after his landing gear departed his aircraft, was alerted to their discovery.

The production superintendent and quality assurance inspectors were notified and 33 FW leadership initiated a one-time inspection for all remaining wing aircraft. Sgt. Jaeger's and Sgt. Currey's keen observations and timely action virtually steered the SIB to the cause of the mishap and led to an engineering review which generated a worldwide Interim Routine Safety Time Compliance Technical Order 1F-15-1414, "One-time Inspection of Main Landing Gear Bungee Assembly."

Their keen insight and intuitive nature will undoubtedly save countless lives.





## GROUND SAFETY AWARD OF DISTINCTION

*Senior Airman Zachary J. Moore  
33rd Maintenance Squadron, 33rd Fighter Wing  
Eglin AFB, Fla.*

Airman Moore's keen eye and attention to detail averted potential foreign object damage (FOD) when he identified foreign objects lodged within an F-15 F-100-PW-100 turbofan core engine module. A core engine module was received from depot and installed. The engine had been sent to the test cell facility where it subsequently failed operational checks and was rejected for magnetic chips in the gearbox chip detector and for fan turbine inlet temperature spread failure. The engine was returned to the jet engine intermediate maintenance shop where it was disassembled for investigative maintenance.

After disassembly, the core module and bevel gear were removed and deemed serviceable. An attempt was made to reinstall the gear assembly when Airman Moore identified that the module running position (the actual position the core is required to be in to run) was incorrect. Airman Moore immediately set the core into an even more extensive maintenance posture by turning the core module over and removing the high pressure turbine (HPT), first stage turbine nozzles, and combustion can assemblies. Soon after removing the HPT, Airman Moore noticed foreign objects were lodged in the module. After removing the combustion can assembly, remnants of what appeared to be a small pen flashlight and batteries were discovered inside the diffuser case.

Airman Moore's keen inspection practices and system knowledge as an aerospace propulsion journeyman saved an \$800,000 module from certain destruction, potentially averting the loss of a multimillion dollar combat asset and loss of life.



## WEAPONS SAFETY AWARD OF DISTINCTION

*Senior Airman Tanya S. Atkins  
3rd Combat Communications Support Squadron, 3rd Combat  
Communications Group, Tinker AFB, Okla.*

This 3 CCG Readiness School Instructor doubles as the Training and Standards Flight Safety focal point. She serves as an instructor for the most realistic communications readiness training in ACC, which arms Active, Reserve, and Guard members with combat skills required to survive and operate in wartime environments. In supporting this mission, she relentlessly searched 320 acres of training grounds for safety hazards to ensure the safe operation of a 5-day, 24-hour field training exercise (FTX). In addition to her grounds preparation and continued vigilance throughout the exercise, she supervised 46 students and 20 aggressor force members, ensuring proper usage and safe operation of 66 M-16 rifles that fired over 1,000 rounds of blank ammunition. She also directed and orchestrated the successful and safe ignition of 96 smoke grenades, nine explosive ground-burst simulators, 30 explosive grenade simulators, and 11 CS (tear gas) grenades, all without incident.

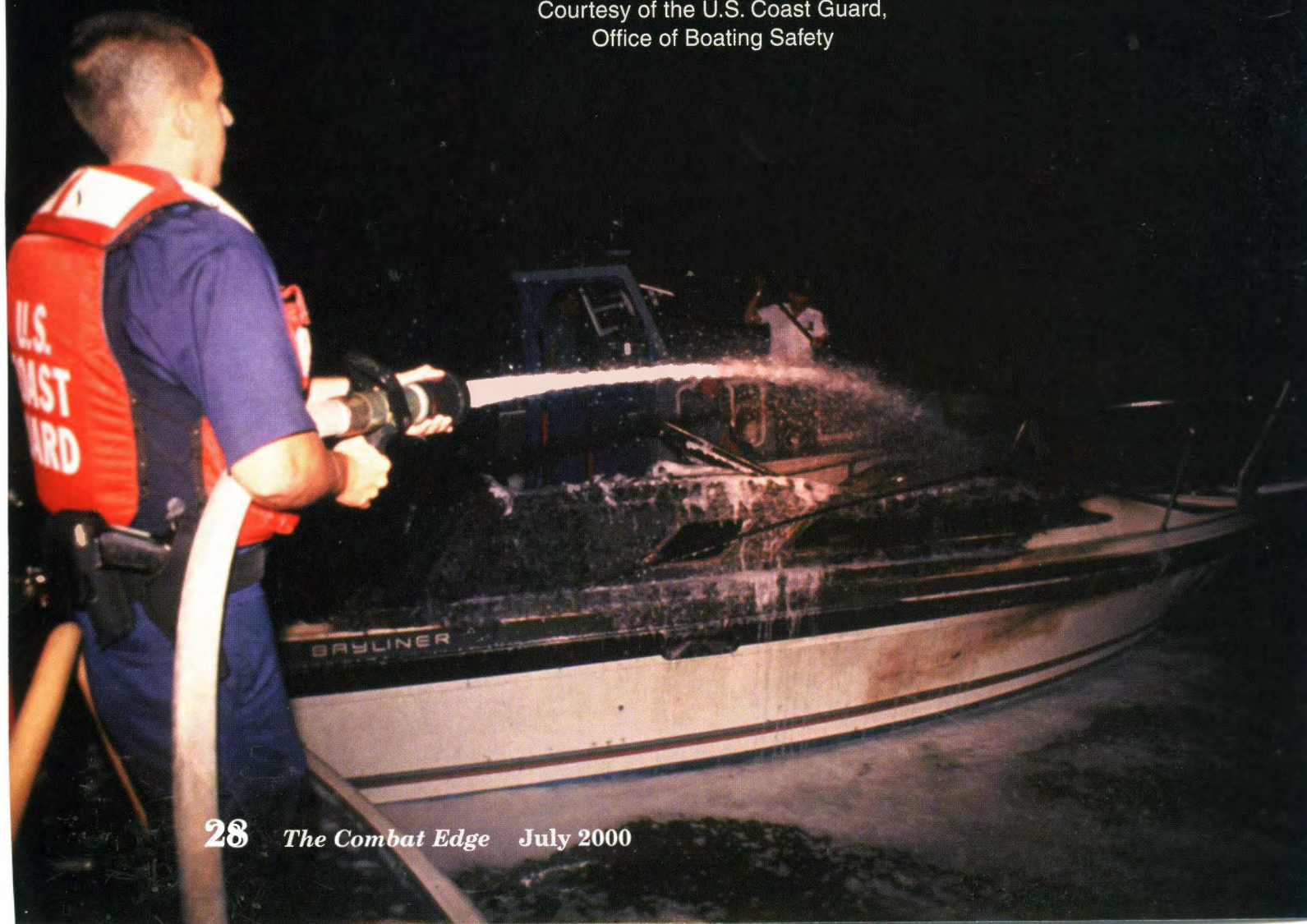
Fully aware of the potential medical complications that may manifest themselves in field exercises, she coordinated with the 72nd Medical Group to arrange for an ambulance and a paramedic to accompany the students throughout the FTX. Her vigilance and high situational awareness resulted in little work for the paramedic, despite the cold temperature, bone-chilling Oklahoma wind, and accompanying snow.

While not in the field, Airman Atkins maintains, inventories, and forecasts the largest munitions account on Tinker AFB. The account consists of 13 different types of munitions, totals over 100,000 separate items, and zero discrepancies were found over the month. As the flight's safety director, she led the preparation for the ACC/IG-conducted 3 CCG Unit Compliance Inspection. Airman Atkins ensured all flight members' AF Forms 55 and workcenters' job safety training outlines were current, complete, and accurate, which directly resulted in zero findings and the receipt of a rating of "fully compliant" in this area.



# Shipsafe is Firesafe

Courtesy of the U.S. Coast Guard,  
Office of Boating Safety





**F**ire safety is something that everyone who owns or operates a boat should practice. Each year, boating fires and explosions injure hundreds of individuals and cause millions of dollars in property damage. While there is a greater chance for a fire or explosion on a boat than on land, many of these accidents can be prevented.

Fuel and fuel vapors are two of the leading ingredients in all boating accidents involving fires and explosions. Keep fuel and vapors in their proper places and make all of your boating trips firesafe.

### **In General or Seasonal**

- ◆ Be alert for damage to your boat's fuel system. Over time, fuel fittings and fuel hoses wear out. Inspect these fittings and hoses regularly, especially near the engine where engine heat and vibration can accelerate deterioration.

- ◆ Inspect fuel tanks annually. Pay particular attention to bottom surfaces that may have been in contact with bilge water. Also check to see if any part of the tank could have rusted or been damaged due to rubbing and abrasion. Permanently installed fuel tanks and closed compartments that contain engine or fuel tanks must be vented to the outside.

- ◆ Be sure the fuel fill pipe is securely mounted, grounded, and located where spilled fuel would be directed overboard. Fuel fill hoses that are dry and cracked or soft and mushy should be replaced immediately.

- ◆ If a hose or fuel tank is leaking, replace it before using your boat.

- ◆ Use only marine-rated parts for repairs.

- ◆ On a boat with portable fuel tanks, make sure the vents can be closed and the tanks have a vapor-tight, leak-proof cap. The vent on a portable tank should be open when the motor is running, but when the tank is not in use, the vent and the cap should be tightly closed.

- ◆ Make sure any powered ventilation (a bilge blower) is operating properly.

- ◆ Be sure heating and cooking appliances on board are secured and operate properly. Refer to the appliance owner's manual for guidance on inspecting for leaks in valves and connections; **NEVER USE A MATCH!**

- ◆ Make sure flammable items are stowed safely and cannot come into contact with cooking or heating appliances or hot engine parts.

- ◆ Make sure fire extinguishers are Coast Guard approved and in working order — that gauges register and nozzles are clear. Take a boating safety course and learn the correct use of a fire extinguisher aboard a boat.

- ◆ Repair all bare wires and loose electrical connections; they might cause a short in your boat's electrical system, which could start a fire.

- ◆ Do not store disposable propane cylinders or charcoal lighting fluid on board.

- ◆ Conduct a bow to stern inspection checking for fuel leaks.

### **Before Casting Off**

Get in the habit of performing these brief steps:

- ◆ "Sniff" your bilges. Usually your nose is the best fuel/vapor detector. It will mean getting down on your hands and knees, but it's the best way to do it.

- ◆ Operate the bilge blower for **AT LEAST FOUR MINUTES** before starting an inboard engine. If you still smell fumes, try to locate the source and make repairs before starting the engine.

- ◆ Make sure all passengers know the location of your fire extinguishers and they know how to operate them.

- ◆ When refueling, close all hatches, ports and other openings; shut off all engines and motors; and refrain from smoking. Fill all portable tanks on the dock.

- ◆ After refueling, wipe up or wash off any excess or spilled fuel; open all hatches and ports; and let the boat air out. "Sniff" your bilges. Operate the bilge blower for at least four minutes before starting an inboard engine. ■



*Courtesy of the National Safety Council*

Children and Drowning

# Children and Drowning

**D**rowning is one of the leading causes of unintentional injury death of children. Most drownings and near-drownings happen when a child falls into a pool or is left alone in the bathtub.

The National Safety Council recommends that a young child should NEVER be left alone in the tub, not even while the person tending the child answers the phone or gets a towel. If you must leave, take the child with you.

Always watch your child by the pool, or at the beach or by a lake. Beware of backyard pools in the neighborhood; your child could wander off and fall in. Enroll children over age three in swimming lessons taught by qualified instructors. But keep in mind that lessons don't make your child "drown-proof."

Older children risk drowning when they overestimate their swimming ability or underestimate the water depth.

**Teach your children these four key swimming rules:**

- Always swim with a buddy.
- Don't dive into unknown bodies of water. Jump feet first to avoid hitting your head on a shallow bottom.
- Don't push or jump on others.
- Be prepared for an emergency.

**Parents should be trained in CPR (cardiopulmonary resuscitation). The National Safety Council's First Aid Institute offers first aid and CPR training.**











**For more information, call 1-800-621-6244. ■**



# Weapon Safety Stats

## ACC Losses for FY 00

(1 Oct 99 - 1 Jun 00)

Number of Weapons Mishaps / Dollar Losses*			
	Class A	Class B	Class C
8 AF	None	None	None
9 AF	None	None	None
12 AF	None	None	None
AWFC	\$20.8M 	\$4.3M       	None
TOTAL	2 / \$20.8M	7 / \$4.3M	2 / \$101K
Weapons Fatalities - None Nuclear Mishaps - None		<div> = Missile Mishap</div> <div> = Explosive Mishap</div> <div>* Cost of most recent mishap(s) not yet available</div>	
Class A - Fatality; Permanent Total Disability; Property Damage \$1,000,000 or more Class B - Permanent Partial Disability; Property Damage between \$200,000 and \$1,000,000 Class C - Lost Workday; Property Damage between \$10,000 and \$200,000			



