



The Safety Beacon is for informational purposes. Simply reading the Beacon does not satisfy your monthly safety education requirements but, unit safety officers are encouraged to use the articles in the Beacon as topics for their monthly safety briefings and discussions.

April 2015

What's in the April Beacon?

- There's an excellent article from our CAP/SEA, Col Bob Castle, on some of the damage that results from hard landings and tail scrapes. Are you noticing damage like that on your pre- and post-flights?
- One of the biggest contributors to the tally of minor cadet injuries is our own cadet fitness program. Read about changes that may be in the works and how you can prevent some of these injuries.
- We have a listing of all the mishaps that closed out in the month of February. This list of mishaps looks a lot like the other months. Once again, I'd like to see every unit take the time to look through these mishaps and discuss how you could prevent things like this from happening.
- Check out a nice example of a lesson plan that can be used to lead a discussion during your monthly meetings. We'll try to provide training aids and briefings guides like this on a regular basis.
- We have another convenient CISM handout to help our members put problems into perspective in times of stress. This would also make an excellent discussion guide for your monthly safety briefing. Keep an eye out for a new CISM web-page coming soon for more useful handouts and briefings.

Notes from CAP/SE

I've got a few quick reminders and random notes for everyone this month:

- BEND OVER! Col Castle wrote a good article in this Beacon (next page) on the need for a good pre-flight and post-flight. To add a little background, we've had several instances where damage was found during a preflight, but it was impossible to determine which sortie it happened on. The previous pilots hadn't looked under the airplane during their pre-flight or post-flight to confirm whether or not there was damage. If I was going to fly, I'd get down on my knees and check out the bottom of the airplane and the tail to make sure I'm getting a good airplane. When I'm done with my flight, I'm going to look at the bottom of the airplane again, so I can positively say there was no damage when I walked away. Do you do the same?
- As I mentioned last month, I am going to start collecting some of your hazard assessment and risk management checklists in the coming months. I want to see what tools you're using and what works best for you so we can make sure we're providing the tools and training you need. Your commanders and safety officers will help me gather the info so make sure you're working through the risk management process for ALL your activities. Like I said last month, get your cadets to help you!
- We *still* need more information on the minor mishaps that are put in the system as "First Aid" or "Matter of Record." The reason we enter these minor mishaps is so we can gather trend information to prevent recurrences. We can't do that if all we know is that a member skinned his knee and got a band-aid. PLEASE give a short summary of the activity, the conditions, the surfaces, copies of your risk analysis, and *anything* that could have contributed to the mishap. If there's not enough information, we'll probably send it back to the wing.

Tail Scrapes and Hard Landings

Colonel Robert Castle, Assistant Chief of Safety

Civil Air Patrol is one of, if not the largest operator of Cessna products in the world. If you're a CAP Pilot, Observer or Scanner, chances are pretty good you're flying a 172, 182 or 206. Quite a few of us did our initial pilot training in the 150/152 or 172. Remember looking enviously at people flying the bigger 182s and 206s and longing for the day when we'd be able to fly the 'big iron'? All that additional horsepower and an extra knob to control the propeller pitch! Cool stuff, right?



The 182 and 206 may look like 172s on steroids but, due to the additional weight and horsepower, they have different flying and handling characteristics. CAP has experienced a number of mishaps over the years from pilots landing with excessively nose high attitudes, resulting in tail scrapes and hard landings which have caused extensive structural damage.

In most cases, the bad landing and resulting damage is reported promptly, repaired by the appropriate maintenance facility and the aircraft is returned to service. However in some instances, the damage goes unnoticed or unreported until the aircraft goes in for a scheduled inspection and mechanics make the discovery.

The importance of a good, thorough pre and post flight inspection cannot be underestimated. Sure, everybody knows you're THE pilot *par excellence*, but what about the pilot who flew the airplane before you? Did they bend something and not realize it? They know that last landing or two wasn't the best they've ever made, but these Cessna's are built tough, right?

When was the last time you actually took a look at the underside of the airplane? Would your preflight catch damage like that pictured? →



Did you look at the ring when you removed the tail tie down? Has it been that way for a while? They're supposed to be round, not flat on the bottom, or bent at an angle. Hard landings manifest themselves in other ways - some obvious, some harder to detect. The main landing gear strut fairings (not the wheel pants but the fairings around the gear strut) tend to take a lot of abuse from people missing the step and frequently have dents in them. A hard landing may cause dents where the fairing joins the fuselage, but it can be mistaken for something caused by a size 10 boot. Hard landings can wrinkle the lower fuselage skin which is visible from outside, but can also cause the nosewheel mount to pull away from the firewall. In some cases, it can wrinkle the cabin floor aft of the rudder pedals.



Much of this type of damage can be avoided through the use of proper flying techniques and the prudent use of a go-around if the airplane isn't properly stabilized on final approach. Carrying too much airspeed down final, misjudging the round out and flare generally leads to ballooning. A hard landing and/or tail contact with the runway surface can result if not corrected by application of power to reduce the sink rate or the use of a go-around. Don't try to correct a high sink rate by pulling back further on the yoke and riding it down until the airplane hits.

I've mentioned looking at the tail tie down ring, but what other signs of damage might be visible? In some cases, a bent nose gear is fairly obvious, but not always. I'm aware of an instance in one wing where the initial report was a maintenance discrepancy regarding a lower cowl camloc fastener that couldn't be secured on a late model 182. It turned out that the female portion of the fastener had broken away from the mounting bracket. When the mechanic removed the cowling to replace the fastener, he discovered that the nose gear support bracket had pulled away from the firewall; a result of a hard landing or a series of hard landings. No one ever owned up to having made a hard landing in that airplane. CAP footed the \$21,000 repair cost for a replacement firewall and cabin floor.

On the 182, you can shine a flashlight through the cowl flap opening to look at the nose gear support bracket and ensure that it's flush with the firewall. If it appears to have pulled loose (i.e. gaps between the bracket and firewall) have the airplane looked at by a mechanic.

A thorough post flight inspection after you're back on the ground will ensure that the airplane is in good shape for the next crew.

Oh, and one more thing, before you push the airplane back into the hangar, make sure the hangar doors are fully open!

Have fun flying and see you next month!



Are We Hurting Our Own Cadets??

By George Vogt, CAP/SE

I share the belief, along with most of the people involved in cadet programs, that our cadets are our most important members. Out of all of CAP's missions, nothing is more important than raising, inspiring, nurturing, mentoring and teaching the leaders of tomorrow. Oops, I left out *protecting our cadets from their own fitness program!* That's important too.

In my short time as your Chief of Safety, it appears to me that the biggest cause of Bodily Injury minor mishaps has been the cadet CPFT program. Out of those mishaps, the largest number comes from the PT Test itself. So far in this fiscal year, only six months old, we've had more than ten injuries in the Shuttle Run alone. It is a bit ironic that the test being used to assess our cadets' fitness is causing the most injuries. Luckily they are minor injuries, but the causes need to be addressed.

The goal of the CPFT program, prominently displayed on one of the Cadet Programs web pages ([Cadet Fitness](#)) is, "to make cadets physically fit and to motivate them to develop lifelong habits of exercising regularly." We have to ask how motivating it is when our program might appear to be oriented toward the "test" rather than the "fitness" and the test is causing injuries.

The folks in Cadet Programs at NHQ, with the help of their volunteer teammates, have been doing some in depth study of our PT program and how it can be improved. They have done vast research with fitness experts nationwide. They've also been nice enough to ask me to take a look through my "safety" eyes to see if anything can be done to prevent some of the injuries.

First, let's take a look at the mile run. That is probably the truest test we have of cardio fitness. We see some cases of tripping, falling, shortness of breath, side-stitches and an occasional twisted ankle or bruised knee. Those can be expected every now and then when you are engaged in sport. However, I have also seen a case in which a cadet tripped over a speed bump. In the dark. I've seen a case of a cadet running into a tree branch that hung out over the route. Also in the dark.



Are cadet leaders and unit safety officers examining the running routes to assess hazards and mitigate the risks prior to the run? Are they performing the required pre-activity risk safety briefing? Those are requirements, but they can also be a cadet learning activity. Before every cadet activity, why not assign a cadet to do the hazard and risk assessments with you and let the cadet do the pre-activity safety brief?

The biggest culprit when it comes to PT test injuries is the shuttle run, and most of those come from improper footwear and inappropriate surfaces. This problem has been around for a while. Back in 2011, Mr. Curt Lafond, Deputy Director for Cadet Programs at NHQ, released a letter for all unit commanders giving guidelines for conducting the shuttle run. That letter is still on the website for your use. Click here: [Shuttle Run Guidelines](#)

In this shuttle run guidance letter, it tells what surface should be used. It directs a “sports surface” such as an indoor or outdoor track, a basketball court, or a tennis court. If a sports surface isn’t available it steers you towards a wood or vinyl floor that is clean and dry, free from debris. It says, “Never conduct the shuttle run on a carpeted floor.” Footwear? “Cadets must wear sneakers/running shoes. Other footwear *is not permitted.*”

Despite the guidance in this letter, I have seen several injuries from running on carpet. A couple slips on loose gravel. One injury came from running in socks, and a couple from running in bare feet. One shuttle run injury involved a run conducted in a carpeted hallway...the cadet lost their balance, ran into a pillar, bounced back on course and still finished the run with an injured shoulder.

What were the cadet leaders thinking? I know what they were thinking. They were thinking that they had to get the test done, because they are required to offer testing, and a promotion cycle was coming up, and it was cold and dark outside, and there was snow on the basketball court, so they simply did the best they could. We understand that situation; the safety psychologists call it an “organizational mishap” in which the rules, regulations and deadlines imposed by different levels in the organization put people in situations where injuries might occur...they are painted into a corner (more on organizational mishaps in the next Beacon).

What can you do when you are faced with this situation? If you’re doing your thorough risk assessment, you should probably come up with the answer that the shuttle run, on that given day, on that given surface, under those conditions, just isn’t worth the risk, and you call “knock it off.” That can be a tough call. You might be tempted to say “it’s good enough” but “good enough” isn’t good enough when it comes to cadet safety!

The Cadet Programs staff is looking at some changes to the program so you won’t find yourself facing those tough decisions quite as often. First of all, they are looking at alternatives to the shuttle run. Realizing that the shuttle run is more of an agility test than a fitness test, they are looking for a replacement.

Also under consideration are ways to take away the deadlines and time-constraints. What would you think about switching from a monthly testing schedule to a quarterly testing schedule? That would allow you to switch your focus to on-going fitness programs for your cadets; perhaps even encouraging cadets to carry a logbook to record self-paced workouts. Once a cadet tests and “certifies” at a certain level, maybe that certification could last for six months? Do you like that idea? Do you have other ideas of your own? Call the folks at Cadet Programs or send it to me at safety@capnhq.gov and I’ll make sure they get it.

“You might be tempted to say ‘it’s good enough’ but ‘good enough’ isn’t good enough when it comes to cadet safety!”



February 2015 Mishap Closeouts

Colonel Robert Castle, Assistant Chief of Safety

Dear Readers,

If you've been a faithful reader of the Beacon each month, Thank You! If you're a new member or just haven't read the Beacon in a while, Welcome!

In previous Safety Beacons, I put my comments about the mishaps at the end of the long list. Those of you who've been looking at the Beacon each month must wonder if I'm just copying the same mishaps from the previous month's edition. After all, it must be hard work doing all that typing. Let me assure you, each monthly close out is all new stuff (I have mastered the art of cut and paste, so I'm not in danger of carpal tunnel or finger sprains) taken from the Safety Reporting system. What we're seeing is a lot of our members making the same errors across the country.



That's why I've moved my comments to the top of the column this month in the hope that you'll read the mishap summary and use the information contained to generate worthwhile discussions at your unit meetings on how to better identify hazards, and mitigate the associated risks. Don't pass up opportunities to discuss situations like those below with squadron and wing members. The goal is not a 'zero mishap rate', but rather to keep our members from getting hurt. I think most people recognize 'zero mishaps' as unrealistic since we're all human and we make mistakes (just checkin' to see if you're paying attention).

Ok, enough safety preaching...on to the list!

Bodily Injury - 25

Aircraft - 5

Vehicle - 2

Bodily Injury

- Cadet passed out during formation.
 - Cadet felt better after resting for few minutes.

- Cadet experienced chest pain.
 - The pain subsided following rest. Cadet returned to normal activities. Pain in chest recurred later that evening and cadet went to hospital where they discovered a blood clot.

- Cadet fell to the gym floor and hit her head shortly after starting drill practice.
 - Fellow cadets provided first aid until first responders arrived and transported cadet to Emergency Room for treatment. Tests proved negative and cadet fully recovered.

- Cadet reported having some difficulty in breathing after physical training exercises.
 - Cadet was attended to by senior members. No further treatment required.

- Senior member awoke with nausea and vomiting, which continued for approximately one hour.
 - Due to a history of seizures, the member asked to be transported to the Emergency Room. After being examined, the member was allowed to return home for rest and made a full recovery.

- Senior member fell while participating in shuttle run along with the cadets.
 - The run was conducted indoors on a carpeted area in an open space. The senior member suffered minor abrasions and refused further aid.

- While playing "memory tag" during PT two cadets ran into each other.
 - One cadet suffered abrasions to the left hand and right knee. The other cadet had abrasion on the right shin. First aid provided, no further treatment required.

- Senior Member slipped on ice and fell with scrape on right fourth finger and striking backside, back and head on ice.
 - First aid administered, no further treatment required. Ice melt applied to icy walkway.

- Cadet participating in PT activity (handstands) was supporting the feet of another cadet, when the other cadet inadvertently struck them in the face with his boot causing a lower lip laceration and swelling.
 - Cadet received treatment at an urgent care facility and a trip to the dentist.

- Cadet was stung on the left hand by a wasp.
 - First aid applied to the sting. No further treatment required.

- Cadet tripped and fell sustaining a minor abrasion to the right knee.
 - First aid applied, no further treatment required.

- Cadet suffered skinned knee and bruised her knee, thigh, and side during PT shuttle run.
 - First aid applied, no further treatment required.

- Cadet received a small cut on the thumb when opening pocket knife.
 - First aid applied, no further treatment required.

- Cadet fainted during formation.
 - Minor injury treated with first aid.

- Senior member tripped on edge of sidewalk suffering abrasions to face and small cut to nose.
 - First aid applied, no further treatment required.

- Cadet indicated that they had felt dizzy and grew disoriented.
 - Cadet allowed to rest and after being interviewed was discovered to be suffering from homesickness and fatigue. Cadet returned to duty.
- Cadet reported an irritated eye.
 - All personnel were given a safety briefing at the school and were wearing personal protective equipment while in the field. First aid applied and no further treatment required.
- Cadet strained muscle during PT.
 - Ice pack applied to strained muscle. After resting and stretching the pain went away. No further treatment required.
- Cadet slipped on ice and received a slight abrasion on chin.
 - First aid not required and cadet returned to duty.
- Senior member struck on right shin by a falling rock during ground team operations.
 - First aid was applied no additional medical attention required.
- Senior member struck on the head and cut by a falling squadron flag.
 - First aid applied, no additional medical attention required.
- Cadet fell while moving desk on wet slippery surface. Pain in both knees.
 - Medical attention not required.
- Cadet slipped while carrying a case of water.
 - No injury or medical attention required.
- Cadet in formation passed out but was caught by the cadet behind.
 - No injuries. The cadet quickly regained consciousness, and was removed from the formation. After resting and eating lunch with plenty of water, the cadet returned to duty. No further treatment required.
- Cadet twisted left ankle while walking in grassy area to runway.
 - First aid administered. Cadet advised that a pre-existing injury to the ankle existed. No further treatment required.

Aircraft

- Pilot noticed that the electrical warning light had not gone out after takeoff.
 - Suspecting a possible alternator failure, crew landed safely at base. Found ground wire for voltage regulator broken, installed new connector and aircraft returned to service.
- The aircraft had briefly departed the runway upon landing.
 - There were no injuries and a post flight inspection revealed no damage to the aircraft. The aircraft was inspected by maintenance; found the nose strut was overinflated which would not allow nosewheel steering to take place after landing.

- After engine start, pilot observed the ammeter showed a large discharge.
 - Maintenance found a spot where the field wire was grounding out near the voltage regulator (on the firewall). The wire was in a shielded bundle with the shield tied to ground. New wiring will be installed from the regulator to the field on the Alternator.

- Non-CAP Cessna 172 wing was pushed into CAP Cessna vertical stabilizer by Fixed Base Operator (FBO) in cold storage hanger causing paint chipping and small dent on leading edge.
 - FBO initiated procedure for his employees requiring at least 2 people before an aircraft is moved. Aircraft is scheduled to be repaired at FBO's expense.

- After approximately 30 minutes, the ammeter showed a large discharge and the ALT INOP LED illuminated.
 - Aircraft had failure of charging system after coming out of maintenance for a similar malfunction. Appropriate action being taken after this mishap, with complete new wiring harness to be installed. Wing will closely monitor aircraft.

Vehicles

- Van hit deer
 - No injuries to CAP members. Minor impact damage to the headlight assembly. No word on how the deer fared.

- CAP van struck by private vehicle as private vehicle backing out from driveway entered roadway.
 - No injuries occupants of either vehicle. Visible body/fender damage to corporate vehicle but initially thought to be drivable. Vehicle pulled from use after driver found altered road-feel/handling upon driving away from mishap scene. Law enforcement cited driver of POV for failure to yield.

Safety Briefing Lesson Plans

George Vogt, CAP/SE

For a squadron safety officer, coming up with a fifteen minute safety briefing every month can seem like a daunting task. You try to find a topic that is interesting and important to your members. You need to keep their interest and you want them to take part and learn something. I'm sure you've witnessed a few PowerPoint lectures that were a powerful sleep aid after a long day!

This lesson plan (I made slight changes so it would fit) was sent to me by Major Mark Razny, the Illinois Wing Director of Safety. Maj Razny recently took over the position from Maj Corey Stohlquist who has moved to the Arizona Wing after his great service with Illinois.

A lesson plan like this doesn't just show a video to provide the information. The discussion that follows will really make the information from the video sink in so it will be easily recalled when needed.

I know a lot of other safety officers use similar briefing guides, or have other products and ideas that work well for them. Each month I'll try to share some of the great ideas that I see, so PLEASE send me your ideas. Send me your tools. Send me your newsletters. I want to see what works for you so we can share it with everyone! safety@capnhq.gov

Thanks, Mark!

Active Shooter

Introduction

Active Shooter incidents have occurred in many different settings:

- Schools
- Churches
- Restaurants

Show Video: Provided by the FBI: "Run, Hide, Fight" - <http://www.fbi.gov/about-us/cirg/active-shooter-and-mass-casualty-incidents/run-hide-fight-video>

Group Discussion:

Create a scenario, like the video, that your members can relate to...

- What would you do?
- What wouldn't you do?
- Situational Awareness?
 - Know your exits
 - Unusual behavior?

Questions/Answers

Summary

D) CISM / Peer Support CAN HELP with Resiliency

- Research shows that people will heal and recover faster from stress by responding to stress appropriately; this is the basis of peer support. Peer support can be as informal as "talking it over" with a trained peer or with a group. Even if you do not want to speak about the incident there is still value in listening to others speak about it. It is **entirely voluntary**, but highly encouraged to participate.
 - CAP Peer Support can be considered emotional **first-aid** to help a CAP member's normal coping skills. It is always confidential, supportive, and respectful; it is performed by a peer supporter – a CAP member just like you who knows how to get you the help you need.
 - All people who undergo a traumatic or critical incident are affected. Talking and going through a CISM / Peer Support is a sign of strength and maturity because it means that you are taking an active role in your health.
 - CISM is a proven process that will help you heal and return to your previous state of health by talking (or listening if you choose not to talk) about the normal process your mind goes through after an incident or trauma.
- Requesting Help (24x7)**
- If you would like to speak with a CAP Critical Incident Stress Management / Peer Supporter contact your Chain of Command, Wing CISM Officer, OR call the CAP National Operations Center at 888-211-1812 ext 300 (24x7) who will coordinate with the appropriate help that best fits your needs. Just say that you want to talk to the CISM Team. You don't need to tell anyone why you want to talk.
 - If you want to speak confidentially with a suicide phone coach call the suicide prevention lifeline at 1-800-273-8266 or text for free at 8388255.

This document or the accompanying presentation found on the CAP Safety website may be used by CISM, Medical, Health Services, Nursing, or Safety Officers as one way to satisfy the monthly safety requirement (when approved by the local safety officer).

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Critical Incident Stress Management (CISM) / Peer Support Monthly Training – April 2015 Putting Problems into Perspective

CAP Senior and Cadet Members have significant stress in their lives. CAP wants to ensure that all members have coping mechanisms available to make all CAP members resilient to life's challenges. Being able to mentally "get up" when knocked down is the goal.

Putting Problems into Perspective will help by:

- Increasing your energy and focus
- Reducing stress / anxiety / distractibility
- Steering you away from poor decisions
- Ultimately allow you to meet your full potential, both in CAP and in your life.

A) Catastrophic Thinking: When faced with a problem, people frequently think that the problem is the "worst ever" and have a difficult time focusing on anything but that "worse ever" problem. This can create anxiety, a feeling of helplessness, decreased focus, and a downward spiral of emotions that can reduce energy and increase poor decisions.

B) Replace Catastrophic Thinking by "Putting Problems Into Perspective". One method is to use the **Contingency Planning Method**. Contingency Planning leads to purposeful actions and will "snap" you out of catastrophic thinking because you will be actively planning a response.

This document is informational in purpose. This guidance is not intended to take the place of medical advice.

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Contingency Planning Method of Putting Problems into Perspective

(Adapted from U.S. Army Resiliency Program)

We are going to use the scenario of receiving a text message from a friend that reads “we need to talk tonight”.

- **Step 1: List the Worst Case Scenarios**
 - Write or mentally list the worst case scenarios and then ask yourself “if the worst happens, what will I do?”
 - In the scenario above: the friendship is over and “if the worst happens” I will increase my friendship with my other close friend.
- **Step 2: List the Best Case Scenarios**
 - Write or mentally list the best case scenarios. Be optimistic because this will “snap” you out of the catastrophic thinking.
 - In the scenario above: great news about something.
- **Step 3: List the Most Likely Outcomes**
 - Write or mentally list the most likely scenarios.
 - In the scenario above: the friend is upset about something but the friendship will continue. You remember that you had said that you would call that friend two days ago, but forgot to call them.
- **Step 4: Create a Plan for the Most Likely Outcomes**
 - Write or mentally list a plan for the most likely outcome.
 - In the scenario above: because you forgot to call the friend back two days ago, you think about several plans:
 - You could call your friend now and say that you are sorry about not calling them back.
 - You could text your friend back and say that you are sorry about not calling them back.
 - You could wait and call them later tonight and say that you are sorry about not calling them back.



Key points of the Contingency Planning Method of Putting Problems into Perspective:

- It does not pretend that “everything is fine” but allows you to think critically and realistically about the problems and come up with reasonable solutions to the problem.
- It directly combats catastrophic thinking by developing strategies to deal with the MOST LIKELY outcomes.
- Perform the steps in order when you become paralyzed by catastrophic thinking.
- Consider talking a friend through the four steps if they become stuck in catastrophic thinking.