

THE DISPATCH



MONTHLY NEWSLETTER FROM CIVIL AIR PATROL SAFETY AND HEALTH SERVICES

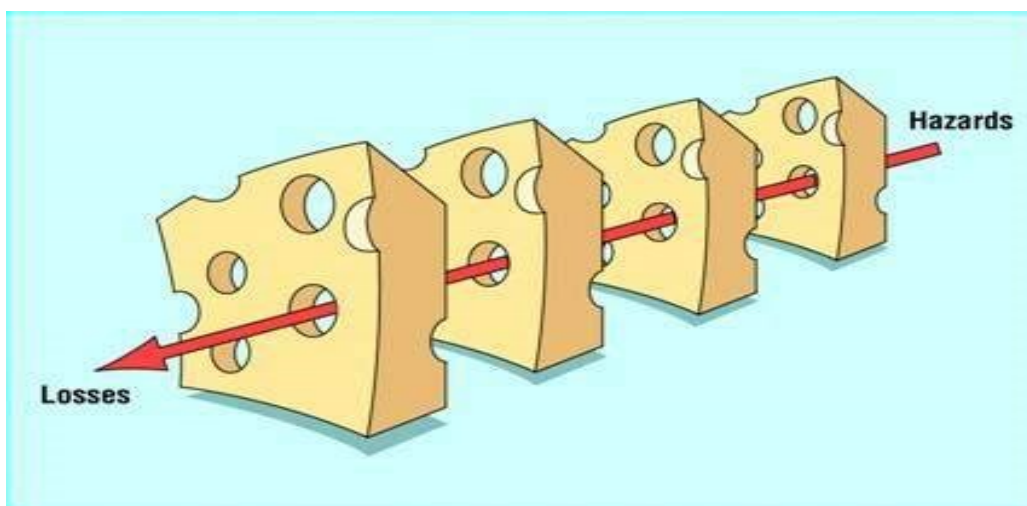
Selecting Contributing and Causal Factors

Michael Nunemaker, CAP Chief of Safety

One of the core ideas of our ideal safety culture in Civil Air Patrol is focusing on continuous learning as the path to ensuring our members can participate safely and that we are good stewards of the resources entrusted to us. Continuous learning means we work to improve our abilities and performance in protecting our members, equipment, and resources by focusing on causal factors when reviewing a safety significant occurrence (SSO): looking into the interactions that humans have with systems and deciding what changes, if any, should be made to improve safe outcomes.

In the transition from our Safety Information and Reporting System (SIRS) to the CAP Safety Information System (CAPSIS), human and non-human factors were integrated to better identify what mitigating actions would reduce the likelihood of a similar event. Often, those actions point to preconditions such as rules, processes, checklists, proficiency/skill, training, and supervision which are all designed to reduce the likelihood of a negative safety outcome. If those conditions aren't used or followed, or they aren't used or followed correctly, the risk to our members is increased - perhaps to an unacceptable degree.

While some exposure to risk is necessary to accomplish our missions and activities, we still have opportunities to reasonably reduce risk by connecting mitigating actions to contributing and causal factors. The two main levels at which mitigating actions and their corresponding factors can work are at the level of the human (i.e., skill, proficiency, decision-making abilities, and physiological and psychological state) and at the level of the system (i.e., the limitations and facilitating processes put in place by the organization). These levels together represent how the holes in the proverbial Swiss cheese are filled, thus improving the chances of avoiding a negative safety outcome.



Rule number one: avoid blame. Focus on what led to the occurrence, not who is responsible for it.

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In our safety culture, it's not humans we should be finding as causal, but the human characteristics that make us all susceptible to errors. For example, a "highly experienced" person is generally less error-prone than one who has just completed training for a task. The process of identifying causal factors is not so much about the actions or inactions themselves but more about what precondition, such as a person's experience and training, could have mitigated the vulnerability.

Rule number two: look at both the human and system levels.

In CAP's safety system, mitigating actions relate to human and system levels and are tied directly to causal factors which represent the pre-conditions that, if properly enacted and practiced, would likely have minimized the likelihood of its occurrence. So, choosing causal factors is more an exercise in finding the missing mitigating precondition. Did the member receive the necessary training? Does training even exist? Should it? Could communications have been clearer? Were expectations clearly discussed beforehand? Who is supervising the activity? Have they been trained? Identify the necessary precondition, and you've probably identified the causal factor.

Here are the main categories of causal factors - remember to think of these as preconditions that can potentially fill the holes in the Swiss cheese. Not all of them will be necessary or reasonable for every situation.

Training. Formal "teaching" of skills, decision-making, and best practices necessary to accomplish a given mission, activity, or task.

Labels/Placards/Signs. Physically posted instructions or guidance that should be available, visible, and in sufficient condition to be used effectively.

Equipment/Tools. The necessary implements for accomplishing a task.

Procedures/Checklists. Published and accessible documents that contain important instructions, steps, or process guidance in order to successfully perform an operation or complete a task.

Communication. The written or verbal conveying of relevant information necessary to conduct an operation or task.

Regulations/Standards/Guidance. Published policy, standards, or non-directive publications that should be referenced as part of accomplishing a mission or activity.

Housekeeping. The cleanliness or organization of a used space.

Facility. A building or indoor/outdoor accommodation needed for a mission, activity, or task.

Supervision. The oversight or management of a mission, activity, or task or providing instruction or an evaluation of a team or individual in the accomplishment of an operation or task.

At the system level, CAP provides the necessary support for members to accomplish each mission, activity, and other event safely. A system is only as good as the humans that interact with it - their abilities, limitations, and other characteristics all play a role in how a system functions. If a system precondition that did not exist previously is needed to assure safety, then the recommended action should be to develop and implement that precondition. If the system already provides a necessary precondition that wasn't used or followed, or wasn't used or followed correctly, then the focused recommendations should be on what led to that.

Stay Healthy: The Mind Edition

Emotional Health for the New Year (AKA – Do the “thING”!)

By Lt Col Jill Silverman, PhD, NYWG

Well, now that I have everyone’s attention as you wonder what in the world that subtitle means, we can discuss how to get 2023 off to a good start and keep it going that way.

We ALL need goals: Goals are Good, they keep us oriented, on track, motivated, and help us feel good about ourselves when we accomplish them. Resolutions are not so good. They set us up for failure if they’re written as absolutes that will be accomplished perfectly with 100% consistency. Nothing works 100% of the time, except gravity and inertia – more on those later. A resolution written as “I will accomplish ____ 5 days a week whenever possible and not feel guilty when I can’t manage it,” is a Goal. And we have already established that Goals are Good.

The th-ING is to keep moving! It refers to virtually all verbs. Do something, especially as the New Year begins. We’re all getting past whatever our holidays brought, and especially where the weather is less than nice, we have become sedentary. Not moving breeds more not moving (remember inertia, above?), and brings with it being bored, feeling down, isolated, and blah; generating behaviors such as overeating, oversleeping, not exercising, and increasing irritability. Make an “ing” happen. Get up, make reasonable plans, and follow through with them. See people in safe ways. Remember that we are in this trifecta of infectious diseases (flu, RSV, and COVID), but go see people. Sometimes it takes a bit of a push (hence goals above). Try something new, and if that’s skiing, remember, gravity always wins: you will get to the bottom of that hill one way or the other. Stay in touch with people. It’s far better to FaceTime with a friend after dinner than to plug yourself into the TV for 4 hours every night.

In short, to get your emotional health off to a great start in 2023 and keep building on it, set some reasonable, attainable, and flexible goals for yourself. Keep yourself moving, doing, experiencing, and involved. Add a healthy portion of these to eating well, good sleep hygiene, and appropriate exercise. Make sure you have opportunities for fun and you’re on a win-win path to emotional health. Have a wonderful New Year!

Stay Healthy: The Physical Edition

By Maj. Jason Quick, TXWG

It’s five o’clock in the morning. You have spent the last week planning and preparing for this day, it’s go time, but somethings not quite right. Sure, you were tired last night and that’s why you went to bed early. Yesterday was a long day and you had to get up early today; however, this is different. Your head is congested, you feel run down. Of all the days for this to happen you finally accept it...you’re sick. This is an all too familiar scenario and despite our best efforts to prevent them, illnesses are a fact of life.

As the Civil Air Patrol returns to normal from our COVID stand down it is important we learn from what was effective in preventing illnesses during the COVID pandemic. While we gear up for the winter season, so do those pesky seasonal illness we know all too well. Maintaining some of the key concepts we adopted during the pandemic will assist us in the overall health of our organization. This is not to say that we should universally wear masks from now on, or become a virtual organization, but it is important to maintain an awareness and act responsibly.

Over the previous two years we took great steps to prevent the spread of COVID, things like social distancing, wearing masks, and hand hygiene are likely the major reason for the steep decline in common illnesses. An article written by the Harvard T.H. Chan School of Public Health cited the Center for Disease Control as having reported 1,316 positive flu cases between September 2020 through January 2021, which is a drastic change from the nearly 130,000 cases reported during the Sept 2019 through January 2020 flu season.

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What this translates to is simple, heightened awareness resulted in effectively minimizing the spread of an illness. Maintaining the health of our membership is far from an impossible task if we all take an active role in it, and this begins at the squadron level. Here are some simple tools for units to practice to improve the health of our members:

FREQUENT HAND HYGIENE: Even though we all want to be in a pristine air-conditioned office, our missions are sometimes dirty. Simply ensuring availability of hand sanitizer with a 60% alcohol content or better at meetings, exercises, or events will provide members the opportunity to practice hand hygiene when facilities for hand washing are not available. While hand sanitizers do not completely get rid of all germs, they can quickly reduce the level.

CLEAN AND DISINFECT COMMON SURFACES: We are all guilty of it, using items like keyboards, desks, vans, or aircraft and leaving them without cleaning. It is critical to the health of our members that we maintain a healthy working space. This is not to say that we should bleach every surface if someone touches it, but wiping them down with approved cleaners after usage, in conjunction with hand hygiene, will go a long way in reducing the risk to our members.

DON'T SHARE PERSONAL ITEMS: It's happened to all of us, we forgot to bring "X", and most of us have witnessed the dreaded "hey let me have a drink of that" happen. Sharing personal items is a critical failure point in improving health. We should ensure that our members have their own personal items at any event. This includes water bottles, toothbrushes, etc. If a member is missing something, find a work around to solve the problem.

STAY HOME WHEN SICK: Our members volunteer their time for a multitude of reasons and this service is critical to the success of our organization. It does not mean that we should expect them to attend during illnesses. We should foster an environment where our members feel that it is "OK" to call in sick. Members who are ill should not attend CAP events. Far too often members feel that they "have" to be there because there is no one else to do what they do. If this is the case, we should evaluate why, and create redundancies to ensure a single "Sick" member does not impact our ability to operate. This concept is especially important to communicate to our cadet population.

MASKS AND VACCINES WORK: At this time, vaccines and appropriate boosters remain the best way to prevent serious illness, hospitalization and death. Masks have also proven, over time and in many countries, to be effective barrier protection against airborne-transmitted illness. Masks and vaccines are part of a layered defensive plan to protect the health of all. No single mitigation element is likely to be completely effective on its own, but together, layered defenses work well.

The health of our membership in the Civil Air Patrol is critical to the success of our missions. Just as we train a "team concept" in leadership it is important for Civil Air Patrol to adopt the same concept in the health of our organization. The whole team approach is critical to improving mission readiness and resilience. By changing the "I" to "We" we foster celebration for the betterment of CAP. this for the health of our members? By simply removing the "I" and adding the "We" to illness the dynamic shifts. "Wellness" should be a team sport.

Winter Aircrew Operations

LtCol Val Mertens, IL Wing

Winter is upon us. There are many items of concern during the next few months that impact flying in Civil Air Patrol aircraft. These are the cold weather hazards that many of us live with, but sometimes overlook when wanting to accomplish "the mission".

Before even heading out from home, we should be preparing for the weather. What are some of the hazards we face? Cold temperatures, snow and ice accumulation and wind chill factors are just a few of these hazards.

When heading out to perform a Civil Air Patrol mission you must think ahead and prepare for the worst scenario. Even in cold weather you can become dehydrated and disoriented if you have not had a good meal before heading out and did not think to bring adequate water for the day. Think also about whether you have emergency warming materials with you. Bring a change of clothes and some blankets in your vehicle in the event of a breakdown enroute to the mission. The extra blankets can be loaded on the

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air-craft during preflight in case you have to land somewhere other than an airfield.

Bring extra food items and water for the same reasons. Most of our aircraft have some sort of survival kit on board, but don't trust that it is enough for your needs. Bring what you think you need and don't forget to add it to your weight and balance calculations.

Once at the airfield, allow extra time for preflight planning and aircraft preparation. Keep your gloves and hat on whenever possible to avoid the chance of cold injuries that lead to frostbite. Ensure your passengers do the same.

Outside the hangar, remove snow as soon as possible to prevent frozen snow ridges and creation of a safety hazard. Aircraft should be able to be moved in and out of hangar and be ready for a mission at any time. Check for overhead ice or snow build-up prior to opening the hangar door! Snow or ice dropping on people or aircraft can cause injuries/damage.

During cold weather months Civil Air Patrol aircraft are usually stored with the TANIS heater plugged and an engine blanket installed. This is required anytime the temperature drops below 40 degrees F for more than 24 hours unless the aircraft is in a heated hangar.

For a winter preflight, pay special attention to all openings and vents for any blockage caused by exposure to winter weather snow, ice and freezing rain. Be sure to check the tire pressures as they can fall in cold weather. Also ensure that your carbon monoxide detector is still active and the correct color.

Brush all snow off of entire aircraft (don't count on snow blowing off during takeoff roll!)

Note: Sometimes frost adheres to surfaces below snow covering. REMOVE IT!

Exercise extra care when warm aircraft has been pulled from hangar and left out in snow conditions.

For cold weather, a general rules for engine starts:

- After three 10-second periods of operation (with a 20 second pause between each) a five minute cooling period is required.
- Failure to observe this can lead to starter overheating and damage/failure.
- DO NOT continue cranking until the battery is dead. This can cause a battery to freeze over in a short period of time.
- After start, DO NOT IDLE BELOW 1000 RPM - Cold temperatures increase probability of lead fouling of plugs.
- SLOWLY INCREASE THROTTLE. Too rapid of a throttle increase will cause the engine to stall in cold weather.
- Exercise constant speed props to prevent congealing of oil in prop.
- Allow extra time for oil to warm up after startup. 10-15 minutes at idle (1000 RPM) may be required to bring oil to minimum operating temperature.
- DO NOT conduct a takeoff until oil temperature is in the green range.

*For specific guidance on cold weather procedures check Section 4 of the Pilots Operating Handbook.

- Plan descents earlier
- Reduce power gradually
- Maintain some power throughout descent
- Keep fuel/air mixture leaned during descent
- Use full carburetor heat as required

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It is also important to remember these two items prior to flight:

FAR 91.527 Operating in icing conditions

(a) No pilot may take off an airplane that has frost, ice, or snow adhering to any propeller, windshield, stabilizing or control surface; to a power plant installation; or to an airspeed, altimeter, rate of climb, or flight attitude instrument system or wing, except that takeoffs may be made with frost under the wing in the area of the fuel tanks if authorized by the FAA.

CAPR 70-1 9.11.7.6. Icing. CAP aircraft will not be flown into known or forecast icing conditions in the area of operations.

The following considerations for cold weather flying that your Wing might want to consider:

Temperatures above 20o F. No limitations. All flight activity permitted.

Temperatures 0o F to 20o F. Maintenance flights, training flights and all actual SAR flights are permitted. The PIC must follow the aircraft POH for proper cold weather operation. Engine cover and pre-heater shall be used if on ground more than 2 hours.

Keep Engine Oil in the Green, i.e., No touch and goes, stop and taxi back; close cowl flaps as necessary; engine idle during maneuvers.

Temperatures 0o F to -20o F. No training or proficiency flights allowed. Actual missions only 2 Occupants minimum (For aircraft Handling and CRM) No touch and go landings, SFRO or Incident

Commander flight Release required. The PIC must follow the aircraft POH for proper cold weather operation. Ultimately pilot, crew and SFRO are responsible for using common sense when flying below 0° F. If flown, crews should ensure proper dress and carry additional gear for crew members, in case of extended exposure to temperatures. Engine cover and pre-heater shall be used when on ground.

If on ground longer than 4 hours, aircraft should be hangered.

Inspire Others To Stay Healthy: It's A New Year, How About A Fresh Start?

By 1st Lt. Heather Parth FLWG

Instead of lofty goals like going from couch potato to triathlete, why not include a few everyday items to bolster your health? Here are five everyday actions to achieve a healthy balance. Using the CAP Five Pillars of Wellness and Resilience as inspiration, challenge yourself to:

MIND: bolster your mental health by having dedicated alert free times. Silence your phone, turn off alerts and break from answering calls, texts and emails. It can be challenging but make it a priority. You'll find yourself looking forward to "quiet zones."

BODY: take a walk outside, weather permitting. The simple act of walking gets your body moving and re-focuses your mind.

RELATIONSHIPS: commit to performing a daily act of kindness. Something as small and spontaneous as allowing another driver to merge into your lane or holding the door can inspire others to do the same.

SPIRITUAL: be present in the moment. Learn to say "no." Being fully present takes practice, especially in a society that expects multitasking. Say "no" to distractions and be in the moment to lessen stress.

FAMILY: spend time with a loved one. Dinner with a grandparent, texting a cousin, or helping a parent are all ways to stay connected. Don't forget that pets are family too!