CIVIL AIR PATROL - NORTHEAST REGION
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- NER Website http://www.ner.cap.gov/
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BEHAVIOR-BASED SAFETY

Most of us spend our days at home, work or school doing the same task over and over. All too often, it becomes such a routine that we adopt a "nothing to it" frame of mind. That attitude gets us into trouble and we have seen this over and over again within CAP. Before we know it, we are daydreaming of our times spent with our families or in some other activates we recently were involved in. We may even witness someone being injured or at least know of someone who has, and still continue with the routine. Witnessing an injury and not acting on it brings our safety awareness to an all-time high only to be replaced over time by complacency again.

Sometimes only when we actually witness the effects an injury that plays on the other person's family or our activities within CAP do we stop to consider that it could have been me?

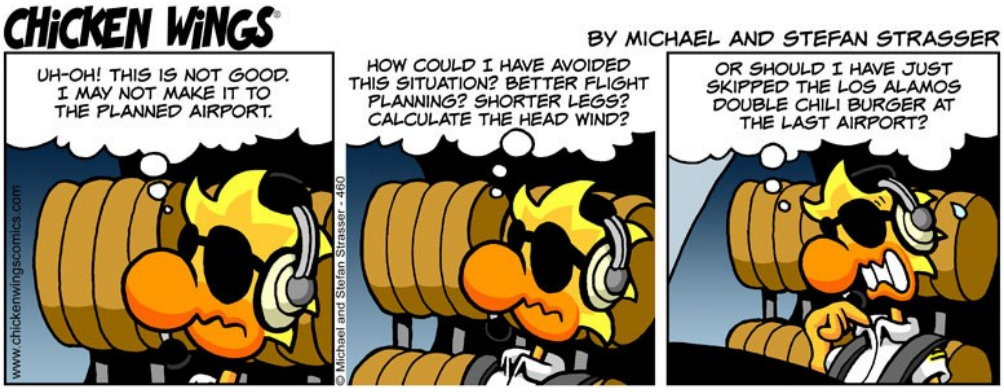
Over the years, I have witnessed the after effects of a disabling injury and seen the tremendous impact and burden that it brings on an entire family and on our professionalism as an organization. I have also experienced the personal benefits of a Behavioral Based Safety process at my workplace that continues to have a lasting impact on my safety as an individual.

In our everyday lives, we can usually find several opportunities to observe potential dangerous situations that require a specific type of safe behavior that has to be taken to avoid an injury.

We stress safety in everything that we do but continue to be complacent in our actions. I have seen the reports coming in from around the region and the approach needs to be more focused on hazard recognition, our eyes become calloused making it difficult to consistently practice the technique of making safe behavioral observations.

In CAP we have been trained to practice this proactive approach to safety, but do we follow our training? We have processes in place but at times end up depending far too much on basic luck.

We are all responsible for Safety!!!!
We are all Safety Officers !!!!
BE SAFE IN ALL WE DO



Flying in the Clouds

The first, best, and safest way to deal with truly hazardous weather is to stay on the ground. Regulations and regulations exist to keep us on the ground under certain conditions.

Not all hazards exist in all clouds, and some of the hazards can exist even outside of clouds.

There are 2 general types of clouds below 20,000ft, Cumulus and Stratus.

Stratus is a blanket type of cloud. It's that type that blocks out the sun if you ever experienced what I mean. This type of cloud forms in stable air and usually means a smooth ride. But icing is common in this layer.

Cumulus are the cotton wool type of clouds. The reason for there shape is because they are formed in unstable air that is always trying to rise higher. If cumulus continue to gain moisture they can become cumulonimbus, a towering grey type of cloud. Both cumulus and cumulonimbus can present some turbulence. If the cloud is still in the cumulus form, this is quite light, but if it is on the cumulonimbus form it can be severe. These types of clouds can also produce lightning and heavy rain. And as glider pilots will tell you, these clouds have strong updrafts. If a cumulonimbus keep growing, it can eventually turn into a thunderstorm.

Now we move up to the mid level clouds, between 6,500ft and 20,000ft. (Not much to say here for me)

The clouds are basically the same as in the low level, but the add "Alto". Example, altocumulus. Alto is greek for high if you're wondering the orogin.

The high level clouds, above 20,000ft are usually cirrus and usually mean plain sailing.

Then there are also lenticular clouds. These types of clouds are almost always avoided by pilots since they mean a bumpy ride. These are sometimes mistaken for UFO's. Try a search for some photos, see why.

There are a lot more types, but these are the primary types.

Poor Visibility: We fly at assigned altitudes with known obstacle clearance and on known routes, so as to avoid collision with terrain. Air traffic control gives us vectors and traffic separation with the use of their radar, to prevent collisions with other aircraft. For the approach to the airport, we must descend. We will follow instruments in our aircraft along a specified course which itself has obstacle clearance standards. Aircraft will not land until the pilot can see the runway visually. Finally, regulations will keep us from flying or landing if the visibility is below a certain point.

Turbulence: Turbulence can exist anywhere, and may be associated with clouds. Again, weather planning can help us avoid flying through it in the first place. Severe turbulence can affect control of the aircraft, so the pilot must be aware of any procedures specific to their aircraft for turbulence (e.g. certain airspeeds or power settings). The main goal will be to maintain a level attitude.

Loss of Horizon/Spatial DisorientationThis is one of the serious hazards of flying into clouds without the proper equipment or training. You will almost immediately lose the ability to tell up from down if you can't see the horizon somehow. We call it spatial disorientation. There are instruments in the aircraft, such as the attitude indicator, that can help. It is critical for the pilot to follow these instruments rather than their own body's senses. Also, many IFR certified aircraft have autopilot or stability augmentation systems that can assist the pilot.

Thunderstorms:Severe turbulence, icing, lightning, hail, microbursts, etc. all await the pilot in a thunderstorm. It is recommended to stay at least 20 miles away from thunderstorms, and some companies may have their own standards (like av8trxx 25 miles). Weather reports and planning ahead of the flight are very important to find the routes that avoid the storms. Some aircraft do have weather radar as well. And of course, there is always the option of waiting for another day to fly.

Bottom Line
The number one is you can't see. If you can't see you cannot avoid other traffic. If you are flying VFR you have to stay out of the clouds. You have no idea who or what is on the other side of that cloud.

FOOT SAFETY A CONTINUATION

HOW TO BREAK-IN NEW BOOTS

Well here we are !!! Last month we talked about Foot Safety well with that in mind we all need to prepare our new boots to keep our feet safe. We all have experienced the new boot or shoe syndrome in getting new foot wear and then having issues because we want to wear them right away and go out and have fun with our new footwear.

This is especially critical with boots. We all know about getting blisters with new Boots and how that can affect us. The key to breaking in new hiking boots is to take things slowly. Remember -- your feet aren't as tough as your new boots, so if you rush things, your feet are likely to pay the price.

Different boots will require different amounts of break-in time. Lightweight models may feel perfect right out of the box, while heavier, all-leather models may require weeks to soften up and form to your feet.

NOTE: Most hiking boots stretch out slightly as they break in. But the break-in process will not turn a poor fit into a good one! Make sure the boots you buy feel snug yet comfortable before you take them home.

The basic break-in procedure

Begin by wearing your boots for short periods of time inside the house. Wear the kinds of socks you're likely to be wearing out on the trail. Lace your boots up tight, and make sure your tongues are lined up and the gusset material is folded flat. The creases you form as you break-in your boots will likely remain for the life of the boot.
Your new boots will be a little stiff at first, which is fine. But if you notice significant pinching, rubbing or pain right off the bat, you may want to take the boots back and try a different style.

If after several short indoor sessions your boots seem to fit comfortably, expand your horizons. Wear your new boots to the local store, around town or while working in the yard. Gradually increase the amount of time you spend in your boots and the distances you cover. Make sure your boots feel good at each stage before increasing your distance.

NOTE: Make sure your new boots fit comfortably before you can wear them outside!

Be vigilant throughout the break-in process for any pain or discomfort. As soon as you notice either, take the boots off. Remember -- small problems can become big ones very quickly. If everything feels good, try adding a little weight on your back as you hike, and/or hiking on more challenging trails.

If your boots feel good throughout the break-in process, but a single pinch or a hot spot remains, you may be able to correct the problem area by visiting a shoe-repair shop or your local REI store. Most have stretching devices that can help alleviate localized boot-fitting problems.
No such thing as a "quick fix"

There is no fast and easy method when it comes to breaking in new hiking boots. To do a good job, you have to put in the time.

Avoid "quick-fix" approaches like getting your boots soaking wet then walking long distances.

They're too hard on your boots and they'll be murder on your feet. Also make sure you follow the manufacturer's care and water proofing instructions carefully.

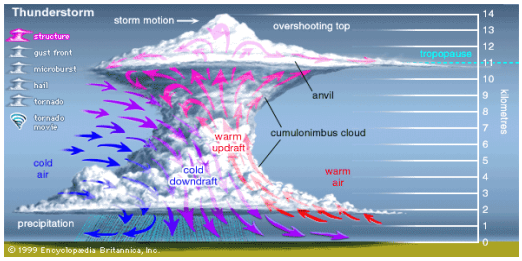
Worn Out Boots !!!!! Get New ones

Thunder Storms and General Aviation

We have all seen and read about the different weather related hazards that we face in General Aviation with all of the topics we have covered thunderstorms are perhaps the greatest threat to pilots because they can be your one -stop-shop for danger. They can produce anything from large hail to tornadoes and microbursts, all of which can be deadly.

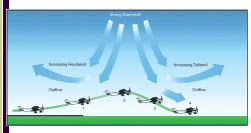
Not all thunderstorms exude these events; three conditions must be present: medium to high moisture content, any amount of air instability and some lifting action. The lifting action can be caused by changes in terrain elevation, frontal changes or temperature increases and decreases.

There are two types of thunderstorms - airmass thunderstorms and severe thunderstorms. Airmass thunderstorms are the most common. They have a tendency to pop up on summer afternoons or during coastal evenings, can be short in duration and are usually scattered. Severe thunderstorms as are more violent and produce wind gusts starting at 50 knots or greater, produce hail ¾ inches in diameter or larger and can also turn out tornadoes.



CYCLES

Thunderstorms have three stages or a life cycle - the cumulus stage, mature stage and dissipating stage. These three stages are seen in each and every thunderstorm formation. The cumulus stage has continuous updrafts as great as 3,000 feet per minute. The storm matures when the cloud becomes too dense to be supported by the drafts of the previous stage.



When you picture a fully-formed thunderstorm cloud, you are thinking of this, the most violent stage of the storm. One side of the storm still has warm updrafts while the leading edge of the storm has cool precipitation. Also at the leading edge are strong winds. In the dissipating stage, the cloud ceiling rises at least 10,000 feet and the updraft is found exclusively within the cloud. The entire cloud now sheds rain and accompanying down drafts.

A thunderstorm can present itself as single-cell, super-cell or multi-cell. We've all seen pictures of the updraft of a thunderstorm. They start out rather flatly at a low altitude and vertical updrafts cause the storm to billow up beyond 30,000 feet. A single-cell thunderstorm isn't anything to sniff at and lasts under an hour. Super-cell thunderstorms are quite severe and can last up to two hours.

Multi-cell storms are condensed groups of thunderstorms in different stages of the life cycle. This grouping causes the storms to interact with each other and therefore last much longer. Sometimes these groupings cause what's known as squall lines. One misconception is that quall lines are always equated with a front. While this is often the case, these squalls can happen anywhere. When they are indeed frontal thunderstorms, they develop 50 to 300 miles in front of a fast-moving cold front.

Lightening

Lightening almost goes without saying. Lightening can be categorized as in-cloud, cloud-to-cloud, cloud to ground and between cloud and clear air although rare. No matter which type lightning's voltage is about 300,000 volts per foot and is an astounding 50,000°F. This heat causes the surrounding air to expand and a corresponding shock wave that we know as thunder.

Lightening strikes can cause external damage to the aircraft but rarely causes catastrophic damage to airplane or crew. It can temporarily blind pilots at night and it can effect the aircraft's navigational equipment.

While turbulence isn't exclusive to thunderstorms, it is an expected and predictable phenomenon unlike unexpected clear-air turbulence. The Thunderstorm-related turbulence occurs right where the updrafts and down drafts combine in. Anyone who as flown through turbulence can relate to the jerky up and down sensation can relate to this.

Turbulence

Turbulence, nicknamed "chop" can be light, moderate or severe. When reporting turbulence to air traffic control from the air, there are no set rules in determining the severity. Pilots leave it up to common sense and previous experience when reporting light or moderate chop, although experts would say moderate chop can be felt when the updraft/downdraft gusts are around 30 knots. Severe isn't usually experience by pilots without their Instrument Flight Rating unless they experience clear-air turbulence, as they stay away from storms and clouds in general. IFR flights are usually channeled away from reported severe turbulence by air traffic control.

Microbursts

Microbursts are perhaps one of the most feared weather occurrences out there. They are low in altitude and can occur in an area of 1 nautical mile or less horizontally and 1000 feet vertically (Abbott & Kailey 2004). Aircraft landing or taking off or low-flying aircraft are most likely to run into this phenomenon.

Microbursts are deadly because the winds can increase upwards of 100 knots but the real danger lies in the downbursts of up to 6000 feet per minute. Many commercial flights over the years have crashed due to microbursts.

Hail

Hail is caused by rain drops being picked up by the updrafts of a thunderstorm which are then frozen at high altitudes. Once they become too heavy to be supported by the updrafts the chunks of hail (anywhere from the size of a raindrop to a baseball or larger depending on how many friends it gathered on the way up) fall to the ground at a high velocity, over 100 MPH. Three-quarters of an inch or more is all the girth that's needed to cause structural damage to an airplane.

Source
Mike Abbott & Liz Kailey et al. 2004. Colorado: Jeppesen-Sanderson
Alicia White former Air Traffic Controller.

Lightning Safety Rules

Lightning is the most prevalent danger from thunderstorms. Thunderstorms are most likely to occur in the afternoon and evening hours.

Thunderstorms produce some of the most powerful weather on Earth, including tornadoes, large hail and destructive straight-line winds. However, the most dangerous aspect of thunderstorms is usually lightning. Over the past 10 years, lightning has killed more people than any other thunderstorm hazard. Lightning is also responsible for a great number of forest and rangeland fires, especially in the drier climate of the western USA. Each lightning stroke contains millions of volts of electricity; enough to supply power for several homes for about a month. Lightning also heats the surrounding air to temperatures of 50,000 degrees Fahrenheit. This rapid expansion of air due to heating generates an audible shock wave that we call thunder.

Lightning is unpredictable and occasionally behaves in strange ways. It can destroy one object without touching another one nearby. Lightning can also strike something such as a tree, then travel across the ground shocking anything and anyone in its path. Lightning normally strikes the tallest object in the area. Stay away from metal objects and water as they are good conductors of electricity from lightning.

Most lightning fatalities occur outdoors, and most often under or near tall trees, in or near water or on hilltops. Lightning can strike the ground up to 20 miles away from the parent thunderstorm. Based on this information, it is obvious why you need to take shelter from thunderstorms while outside. One reliable way to estimate your distance from a thunderstorm is the "Flash To Bang" technique. Count the number of seconds between the lightning strike and the thunder. Divide the number of seconds you count by five. Every five seconds equals about one mile. It is recommended that you should begin to seek shelter if the time between the lightning flash and the thunder is 30 seconds or less. You should not resume outdoor activities until 30 minutes after the last audible thunder. This is known as the "30/30 Rule".

Stay off corded telephones when lightning is in your area, since the electrical discharge from lightning can travel along the telephone lines and produce fatal results. It is also recommended that you unplug sensitive electronics such as computers when lightning is expected in your area. Stay away from electrical devices and stay out of shower stalls and bathtubs, swimming pools and lakes when thunderstorms threaten.

The best defense in protecting yourself from lightning is to plan ahead and avoid being caught in a vulnerable position. Check the weather forecasts prior to venturing outside, especially if you are traveling into mountainous or open terrain where there is little or no shelter. Plan outdoor activities for early in the day before thunderstorms develop.

If thunderstorms threaten, seek shelter in a building or in an enclosed metal roof vehicle, making sure all windows are closed. Never seek shelter under an isolated tree or small group of trees. If you are in a heavily forested area, take shelter in a low spot and away from the taller trees. However, avoid areas which could be prone to flash flooding. If you are caught in the open, do not lie flat on the ground. Instead, squat low to the ground, clasp your hands around your knees and put your chin to your chest. Make yourself the smallest target possible and minimize contact with the ground. Do not become a "human lightning rod".

Pesticide Safety Tips

Warm weather brings out all the little critters and many will be using pesticides to deal with this.

Although pesticides can be useful, they also can be dangerous if used carelessly or not are stored properly. Here are some tips for safer pest control:

The most effective way to reduce risks posed by pesticides is to use non-chemical control methods to reduce or eliminate pest problems. Around the home, such measures include removing sources of food and water (such as leaky pipes) and destroying pest shelters and breeding sites (such as litter and plant debris).

If you decide you must use pesticides, always read the label first and follow the directions to the letter, including all precautions and restrictions.

Don't use products for pests that are not indicated on the label and don't use more pesticide than directed by the label. Don't think that twice the amount will do twice the job.

Use protective measures when handling pesticides as directed by the label, such as wearing impermeable gloves, long pants, and long-sleeve shirts. Change clothes and wash your hands immediately after applying pesticides.

Before applying a pesticide (indoors or outdoors), remove children, their toys, and pets from the area and keep them away until the pesticide has dried or as recommended by the label.

Don't spray outdoors on windy or rainy days. Take precautions to keep the pesticide from drifting or running off into the vegetable garden, pool, or neighbor's yard.

Remove or cover food during indoor applications.

If using a commercial applicator or lawn care service, ask for information about potential risks and safety precautions to take.

Don't buy more pesticides than you will need. If you have leftover pesticides, check with your local government to determine whether your community has a household hazardous waste collection program or other program for disposing of pesticides. If no community program exists, follow label directions and any state or local regulations regarding disposal.

Keep the telephone number of your area Poison Control Center near your telephone: 1-800-222-1222.

General First Aid Guidelines

Swallowed poison. Induce vomiting. ONLY if the emergency personnel on the phone tell you to do so. This will depend on what the person has swallowed; some petroleum products or caustic poisons will cause more damage if the victim is made to vomit.

Poison in eye. Eye damage can occur, within minutes with some types of pesticide. If poison splashes into an eye, hold the eyelid open and wash quickly and gently with clean, running water from the tap or a gentle stream from a hose for at least 15 minutes. Do not use eye drops or place chemicals or drugs in the wash water.

Poison on skin. If pesticide splashes on the skin, drench area with water and remove contaminated clothing. Wash skin and hair thoroughly with soap and water. Later, discard contaminated clothing or thoroughly wash it separately from other laundry.

Inhaled poison. Carry or drag victim to fresh air immediately. If you are able to get to the victim because of fumes, immediately contact the Fire Department. Loosen victim's tight clothing. If the victim is blue or has stopped breathing, give artificial respiration (if you know how) and call rescue service for help. Open doors and windows so no one else will be poisoned by fumes.

The weather and the long days are upon us. This brings the motorcycles out on the road. I have been riding since I was a young boy and through the years have seen my share of accidents. Being in pre-hospital emergency care I have seen terrible accidents which could have been prevented. So this topic is very meaningful to me personally.

Motorcycles are vehicles with the same rights and privileges as any motor vehicle on the roadway. All motorists are reminded to safely "share the road" with motorcycles and to be extra alert to help keep motorcyclists safe. Motorcyclists are reminded to make themselves visible to other motorists.

The most predominant cause of motorcycle accidents is when motorists do not recognize the presence of a motorcyclist on the road. This in turn causes collisions and the chances of the accident being fatal are quite high. Some of the accidents with vehicles involve one vehicle while others involve multiple motor vehicles. As mush as this is them most common cause of these accidents, cases of deliberate action by a driver resulting in accidents have registered very few occurrences if any

Most of the motorcycle accidents occur at junctions and at point of intersections. They are also common if the motorists violate the rules that govern the right of way as well as other rules regarding the control of traffic. Contrary to the belief of many people, unfavorable weather conditions have not been regarded as one of the major causes of accidents. However, if the weather conditions affect the glare and the visual acuity, then it increases the risk of accidents occurring.

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Remember—Remember –Remember

We take Safety very seriously and Safety is an everyday thing that needs to be included in everything that we do. Safety can not be neglected or bypassed just because it is more convenient to do so.

BE SAFE

EMAIL, IM, CHAT

E-mail

Through e-mail, users can easily send and receive messages. These messages may also have text, audio, and picture files attached. Signing up for an e-mail account is simple, as most services offer them for free and do not check the identities of users. This allows cyberbullies or scam artists to anonymously send harassing messages or spam. Sometimes these messages contain viruses, scams, or other inappropriate content.

Instant Messaging

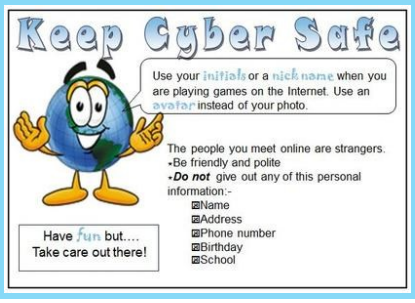
Instant messaging programs allow users to exchange real-time messages with people from a list of contacts, also known as a "buddy" list. You may not know the identities of these buddies, as IM accounts can be acquired anonymously. Trusted adults should review children's buddy lists for unknown contacts, and talk to them about the identities of the people on the lists. Trusted adults should also learn some of the chat acronyms, such as POS (parent over shoulder) and A/S/L (age/sex/location), which some use to communicate over IM. This will help you be aware of anyone saying anything inappropriate to your child.

Chat Rooms

Chat rooms are online hang-out spots where anyone can talk about anything—current events, books, and other common interests. Users often do not know each other in real life, so it is important that trusted adults keep a close eye on the content of any conversations.

Chat rooms offer features which allow users to chat through private, one-on-one messages. Predators may use this to entice children into conversations about sex and offline meetings. Parents and guardians should be aware of secretive behavior, such as a child minimizing the screen when an adult enters the room.

Start a discussion At your meeting

- Do you use IM or chat rooms to talk to your friends and others?
- How many people do you have on your buddy/contact list(s) and who are they?
- Have you ever chatted with someone you did not know in real life? What kinds of things did you talk about?
- Does the social networking site you use have e-mail, IM, or chat rooms?

Do you know how to block others in chat rooms and IM? Can you show me how to do this?