

Safety Stand Down Day

Presented 9 July 2009

To

Kasler Senior Squadron

GLR-IN-069

&

Metro South Composite Squadron

GLR-IN-228

Safety Stand Down Day

Required Topics (part 1)

GENERAL SAFETY INFORMATION - All units will discuss:

- Proper Hydration during activities and the causes of heat-related illnesses.
- Review CAPR 62-2 (Safety – Mishap Reporting and Investigation) and Indiana Wing Policies, as well as group and unit specific policies, for reporting and safety training

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Required Topics (part 2)

AIRCRAFT SAFETY – Aircraft custody units and units with active CAP pilots will:

- Review pre- and post-flight inspection procedures and review the entire aircraft inspection checklist
- Perform a safety inspection on their assigned aircraft
- Ensure all required paperwork and safety equipment is present, intact, and current per CAPR 66-1 and Indiana Wing Supplements

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Additional Item(s)

ALERT: Salmonella found in MRE packages

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Why are we doing this?

- Because of a significant overall increase in mishaps, IN Wing command mandated an extra “Safety Stand Down Day” this year.
- The goal is to increase awareness in general safety issues and bring safety to the forefront of CAP member's minds by limiting CAP to safety briefings and actual emergency services for one day during the period of 6 July 2009 through 13 July 2009.

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Code Phrase

Throughout this presentation, there are four (4) separate lines which make up the “Code Phrase”. You may want to jot them down or make note of their location as you will be asked for the phrase at the end.

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Hydration & Heat Related Illnesses

Scene from Wild Hogs – Dehydration pt.1 (:47):

<http://www.youtube.com/watch?v=fTssVZiIS4I>

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Hydration & Heat Related Illnesses

Stay hydrated by drinking appropriate types and quantities of fluids and watch out for symptoms of dehydration.

Wilderness Survival: Dehydration Symptoms (1:06):

<http://www.youtube.com/watch?v=umndCsww-Pc>

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Hydration & Heat Related Illnesses

The following document was written by Tony Jabbour, MD. While the focus is on athletes, many items apply to our activities within CAP, especially in hot weather. Pay particular attention to those items in **yellow** or **red**.

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HEAT RELATED INJURIES AND HYDRATION
PROTOCOLS

HEAT EXPOSURE SYNDROMES
AND
FLUID REPLACEMENT

By
TONY JABBOUR, MD

PART I

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INTRODUCTION

Heat stroke deaths still occur in high school football and college wrestling. It can also occur in other sports during the hot summer months. Environmental heat-induced deaths can be preventable. In recent years, educated coaches have helped significantly in decreasing the incidence of heat related deaths in athletes. This article will detail some of the causes of dehydration and heat illnesses as well as preventative measures that the athlete, his family and the coaching staff can undertake.

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SWEATING AND ELECTROLYTE LOSS

Sweating begins when the body is challenged by elevated environmental temperature. **Sweat production increases sharply with increasing temperature and can result in loss of more than 10 liters of fluid in 24 hours. Sweat rate can reach 2 liters per hour during intense activity in warm weather.**

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Sweating is an efficient means of cooling the body when the humidity is low. When humidity rises the evaporation of sweat decreases; no heat loss results from sweat that drips off of or remains in clothing. **Although pouring water over head and neck may feel good, this practice does little to reduce body temperature** because skin is usually already covered with sweat. Athletes **must be encouraged to put more fluid in their stomachs than on their heads.**

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Sodium, chloride, and to a lesser extent, potassium and magnesium are lost in sweat. Salt tablets are not recommended without the supervision of a physician. The American diet provides more than enough sodium to replace losses.

Sodium rich foods include pizza, ham, and potato chips.

Potassium rich foods include citrus fruits, juices, melon, strawberries, tomatoes, bananas, potatoes, meat, and milk.

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WATER LOSS

Dehydration (less than 2% of body weight) will impair performance and increase the risk of heat illness. Adequate food intake is essential to maintain normal hydration and prevent an abnormal rise in body temperature. The average adult requires around 2½ liters of fluid each day. The average athlete requires an additional 1 1/2 liters to 2 liters of fluid per hour of exercise. Therefore, athletes must conscientiously consume fluids before, during, and after an event or practice to ensure normal hydration. Since thirst is not a good indicator of dehydration, the athlete should be weighed before, during, and after training and competition. This will allow for more accurate determination of fluid loss. The athlete should ingest a fluid volume that is 125% of sweat loss (1 liter of sweat equals 1.25 liters of fluid intake).

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Athletes should avoid consuming excessive protein, caffeine, and alcohol because these substances will increase urine output and result in further dehydration.

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HEAT EXPOSURE SYNDROMES

1. **Heat cramps may be caused by excessive muscle fluid loss and electrolyte imbalance.** Heat cramps usually occur in those who sweat profusely, usually before acclimating to hot weather and it usually occurs in legs, arms, and abdominal muscles.

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2. **Heat exhaustion** is next in severity in regards to heat exposure syndromes. It is caused by inadequate cardiovascular response to the circulatory stresses of heat exposure. Blood volume is insufficient to respond to demands for increased flow to skin, muscle and viscera. Peripheral vascular collapse (shock) occurs. Heat exhaustion can result from salt depletion or more commonly, water depletion. Symptoms will include weakness, headaches, nausea, vomiting, and even unconsciousness.

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3. Heat stroke is the least common however it is the most serious heat illness. Heat stroke is failure of all of the body's neurologic cooling mechanisms resulting in severe hyperpyrexia (body temperature greater than 105 degrees Fahrenheit or 41 degrees Celsius). Heat stroke is a true emergency with very high mortality. Heat stroke death can even occur at ambient temperatures as low as 70 degrees Fahrenheit. Treatment is immediate cooling by immersing athlete in bathtub of ice filled with ice cooled water and wet sheets or compresses or fans during transport to the hospital.

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In part II, I will discuss some preventative measures and hydration protocol that is recommended to coaches, athletes and families.

For more information log on to www.drjabbour.com

Dr Jabbour is the team physician and sports injury advisor to Cascia Hall High School, Tulsa Crude United States Hockey League and Oklahoma Region Volleyball Association.

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YouTube Video Break:

Jet Ski Dehydration (1:06):

<http://www.youtube.com/watch?v=dvM18oqdCL0>

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HEAT EXPOSURE SYNDROMES
AND
FLUID REPLACEMENT
By Tony Jabbour, M.D.

PART II

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REDUCING RISKS OF HEAT STRESS

1. Acclimatization describes the body's physiologic adaptation to heat stress. It also describes the increase capacity to work in the heat. There is controversy if acclimatization occurs in days or months, most researchers believe that acclimatization occurs in 4 to 7 days with as little as 90 minutes of exposure to heat per day.

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2. Pre season conditioning – physically fit athletes require much less acclimatization in high heat and humidity than those who are not well conditioned.

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3. Coaching techniques can significantly lessen risks of heat illness. Workouts in light weight, porous, and light colored clothing with short sleeves and short socks are usually recommended. Perspiration soaked uniforms should be changed during the practice session, and skin should be exposed to air and helmets removed as often as possible. Early morning or late afternoon practices are recommended when weather is hot and humid. During practices in late a.m. or early p.m., players must be acclimatized to these conditions. Practices should be shorter and less intense with less clothing or uniforms and more frequent rests and fluid breaks in shaded and breezy areas. Athletes who have lost 2% of body weight should be excluded from practice.

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4. Fluid replacement – **Unrestricted fluid intake during practices and games is encouraged.** Ideally, the rate of fluid replacement should approximate rate of sweat loss, which can be checked with daily weighing. **A well hydrated athlete can work longer, harder, and more safely than one who is dehydrated.**

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5. If a sports drink is not available, plain water is a good thirst quencher. However, ingesting water only will turn off the thirst mechanism prematurely thus reducing voluntary fluid intake. **Sports drinks are the preferred beverage when athletes are working hard and sweating profusely.** The sweeteners and flavor of the sports drink may encourage voluntary fluid intake. The carbohydrate in the sports drinks supplies energy to active muscles and the electrolytes help maintain fluid intake and fluid retention.

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6. Replacement of Sweat losses - **If sweat losses are not replaced, body temperature rises, leading to exhaustion, heat stroke and perhaps death.** Sweat losses are tracked by decreases in body weight. One pint of sweat equals one pound of body weight. Fluid loss as little as 1% of body weight can cause body temperatures to rise. Fluid loss of 3% to 5% of body weight stress the cardiovascular system and impairs the ability to dissipate heat. At 7% fluid loss, collapse is likely. Although athletes commonly dehydrate 2% to 6% during practice in the heat, this level of dehydration is both detrimental to performance and potentially dangerous.

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7. Monitoring hydration status – Athletes need to record nude dry body weights before and after practices. Each pound lost during practice represents 1 pint of fluid loss that must be replaced before the next practice. **Indicators of dehydration include dark, yellow urine, decrease urinary frequency, rapid resting heart rate and prolong muscle soreness.**

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FLUID REPLACEMENT

The ultimate goal of fluid replacement in sports is to start exercise hydrated, drink plenty of fluid during exercise, and to re-hydrate before the next session. Two hours before activity the athlete should consume at least one pint of fluid. Athletes should **limit caffeine intake**. Caffeine acts as a diuretic; thereby causing more of urine output than what has been taken in. During activity, athletes should be given time to drink fluids. They should start drinking before they are thirsty and should be reminded to continue to drink at regular intervals.

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Although cool water is an ideal fluid replacement, sports drinks can also be consumed. If athletes find flavor drinks more palatable than plain water, they may drink more.

Sports drinks contain carbohydrates, water electrolytes. The sugar content is about 6% to 8% which allows more rapid absorption of water.

After activity, total fluid intake should exceed 1 pint per pound to prepare the body for the next bout of exercise.

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SUMMARY of FLUID REPLACEMENT GUIDELINES

1. Drink 16 ozs. of cool beverage 2 hours before work out.
2. During activity, drink frequently 6 to 8 ozs. every 15 minutes.
3. Provide cool beverages at 50 to 70 degrees Fahrenheit.
4. Athletes need to be reminded to drink during activities (thirst is not a good indicator of dehydration).

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5. After work outs, replenish fluids at the rate of 1 pint for every pound lost. Weight should be back to normal prior to next work out (weight loss early in the season is mis-identified as fat loss: fat loss does not occur this rapidly early in season).

6. Cold water or cold sports drinks can be utilized.

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YouTube Video break

J.S. Giguere of the Anaheim Ducks:

Why Giguere thinks hydration is such a big priority (:31):

<http://www.youtube.com/watch?v=cS9ITJnz9Zs>

What happens he suffers from dehydration (:37):

<http://www.youtube.com/watch?v=r-hvhKJuSCU>

Which is followed by.....(:23):

<http://www.youtube.com/watch?v=WWnYdFysznA>

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Code Phrase (part 1 of 4)

Finding his crew member was dehydrated and suffering from heat exhaustion,

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YouTube Video break

If you can't carry enough water for your needs, this product may be a good, light weight alternative, which can be carried in a pocket (:32):

<http://www.youtube.com/watch?v=YEs4A7kXG8w>

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CAPR 62-2, IN Wing Policies – Reporting & Training

The “Group V Incident / Accident Notification Policy Letter” dated 20 January 2009 is amended with this letter.

Changes are in Brown

1. CAP Regulation 62-2 dated 8 November 2002 and including Change #1 dated 22 April 2005 States as CAP’s Safety Policy: “The overall purpose of mishap reporting and investigation is mishap prevention. Prompt notification and reporting of all CAP mishaps to the appropriate officials is mandatory. When serious injury or death is involved, there will be no formal or informal investigation conducted by CAP unless directed by National Headquarters.”

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CAPR 62-2, IN Wing Policies – Reporting & Training

2. CAP Regulation 62-2 paragraph 5a states, “In the event of any incident involving CAP personnel or property Per CAPR 62-2, the unit or activity commanders are responsible for completing and submitting a CAP Form 78, andor CAP Form 79 within 48 hours of the mishap.” CAP Form 78 and CAP Form 79 are available on-line at Civil Air Patrol E-Services. Copies of the completed form are to be mailed or E-Mailed as directed in para 6a below.

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CAPR 62-2, IN Wing Policies – Reporting & Training

A. CAPR 62-2 Attachment 1, Paragraph 1 defines: “Bodily injuries to be reported on CAPF 78. All deaths or serious injuries are to be reported immediately, followed by a CAPF 78. ‘*’ Denotes serious injury IAW CFR Title 49, NTSB paragraph 830.2.”

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CAPR 62-2, IN Wing Policies – Reporting & Training

- All broken bones. *(All fractures are serious injuries except simple fractures of nose, fingers, or toes.)
- All lacerations requiring sutures. *(Severe hemorrhage.)
- Injuries involving internal organ damage.
- All injuries that result in a loss of consciousness (not including fainting).
- Insect bites that result in adverse reactions.
- Injuries to the eyes, ears, throat, or head, including foreign objects in the eye.

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CAPR 62-2, IN Wing Policies – Reporting & Training

- Back injuries caused by improper lifting, twisting, etc.
- All burns of second degree or greater severity or burns affecting more than 5% of the body.
- All cases of injuries caused by inhalation, absorption, ingestion, or contact of hazardous materials.
- Poisoning of any kind.

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CAPR 62-2, IN Wing Policies – Reporting & Training

- All cases of heatstroke, sunstroke, heat exhaustion, frostbite, or hypothermia.
- All injuries resulting in hospitalization for 24 hours or more. *(Hospitalization greater than 48 hours.)
- All dislocated bones/joints. *(Severe nerve, muscle or tendon damage.)

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CAPR 62-2, IN Wing Policies – Reporting & Training

B. CAPR 62-2 Attachment 1, Paragraph 2 states: “Non-reportable bodily injuries. No CAPF 78 required. (Generally considered first-aid type injuries.) These injuries will be recorded on a unit log by the unit safety officer and do not require a CAPF 78 to be completed.” An information copy of the unit Safety Officer’s Log recording this incident will be sent via E-Mail or Fax to the Group V Safety Officer and Indiana Wing Safety Officer via E-Mail or Fax as copy within 7 days of the incident.

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CAPR 62-2, IN Wing Policies – Reporting & Training

- Non-reactive insect bites or stings, i.e., simple bee stings or spider bites.
- Fainting where there is no lasting trauma, i.e., fainting during drill exercises, etc.
- Simple sprains, muscle pulls, muscle spasms.
- Upset stomach, sore throat, stiff neck.
- Intentionally self-inflicted injuries, i.e., hitting the wall with the fist, fighting, etc.

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CAPR 62-2, IN Wing Policies – Reporting & Training

- Minor sports or activity injuries such as black eyes, bruises, sore muscles, bloody nose, skinned knees, scrapes, minor cut lips, fishhook in finger, etc.
- Crushing injuries to fingers or toes where no bone is broken, i.e., mashing finger in car door, etc.
- Minor nicks and cuts.
- Sunburn, poison ivy, poison oak, etc.
- Asthma attacks.

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CAPR 62-2, IN Wing Policies – Reporting & Training

3. Other minor injuries of similar nature to those listed above. Good judgment should be a guide as to what injuries should be reported. At the same time as the reporting requirements listed in CAPR 62-2 Paragraph 4, for all Group V units, the reporting individual will also notify the Group V Commander and Group V Safety Officer. This additional notification does not supplement or replace the notification policy stated in CAPR 62-2 or any Wing or Region Accident / Incident Policy or Supplement

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CAPR 62-2, IN Wing Policies – Reporting & Training

A. Notification to the Group V Commander and Group V Safety Officer can be made by landline with an E-Mail or Fax follow-up. A message or voice mail can be left on an answering machine or voice mail but the notification will not be considered complete until the Group V Commander and Safety Officer has acknowledged receipt of the notice.

B. Notification must be completed within 48 hours of the incident or accident.

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CAPR 62-2, IN Wing Policies – Reporting & Training

4. All injuries listed as Non-Reportable by CAPR 62-2, Attachment 1, Paragraph 2 will be considered upgraded to a Reportable Injury and a Form 78 is required to be prepared within 24 hours **for** any of the following occurs:

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CAPR 62-2, IN Wing Policies – Reporting & Training

A. An injury that receives any medical care within 72 hours of the individual's returning to their home base.

a. The Form 78 will indicate that medical care was required after the injury occurred that had been initially determined as "Non-Reportable" at the time.

B. Any injury involving a cadet, where the parent or guardian requests or requires an official notification (Form 78) be made.

a. The Form 78 will indicate this incident was upgraded to "Reportable" per the parent or guardian's request.

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CAPR 62-2, IN Wing Policies – Reporting & Training

5. At any activity where any accident or injury occurs, the activity commander must be notified immediately. Notification will include but is not limited to the Individual's Name, CAPID, Unit, and Type of Injury. The incident commander will be the final authority for determining the initial status of the injury.

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CAPR 62-2, IN Wing Policies – Reporting & Training

A. Regardless of the activity type or command level, the Group V Safety Officer and Group V Commander will be notified of any incident or accident in which Group V member's, Aircraft deployed to a Group V Unit, or a vehicle assigned to any individual or unit is involved. CAP Form 78 and/or Form 79 will be initiated by the command level policy of the level of command concerned.

a. For reporting purposes, if the individual is on a Group V charter number, regardless of any wing position held, the reporting requirement listed in 5A will be considered in force.

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Code Phrase (part 2 of 4)

Form 78 was submitted

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Aircraft Safety – Pre- & Post-Flight Inspections

Checklists are used for all phases of aircraft operation. Proper preflight is no exception.

The following video is of a DH4 Airplane and shows the result of an improper preflight, where the control lock was not removed. This could have been noted multiple times prior to takeoff by the proper use of appropriate checklists.

Please note that this is very graphic (:29):

http://www.youtube.com/watch?v=g59YfnN_ArU

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Aircraft Safety – Pre- & Post-Flight Inspections

Review entire aircraft Preflight inspection checklist (see separate pdf file on the Kasler Squadron website at

http://kaslersquadron.org/Documents/C182T_G1000_Checklist_23_July_2007.pdf).

- **Make sure to USE the checklist during EVERY Preflight, just as you would any other checklist.**
- **CAP is adding “Remove before flight” ribbons to “tail skids” (aka tail tie down rings) – Look for those.**
- **All CAP pilots should be conducting a Post-Flight inspection of the aircraft at the end of each flight**

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Aircraft Safety – Pre- & Post-Flight Inspections

- CAP uses Cessna's checklists due to the C-182T being a “Technically Advanced Aircraft”.
- Other “supplemental” checklists are allowed as the pilot deems appropriate. For example, items such as:
 - “Remove lock box from wing tie down ring”
 - “Remove foam from ailerons”
 - “Remove foam from flaps”
 - “Review power failure on takeoff prior to taking runway”

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Code Phrase (part 3 of 4)

after the Post-Flight Inspection

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Aircraft Safety – Inspection on assigned aircraft

Since no aircraft is currently in the custody of GLR-IN-069, this item will not be covered

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Aircraft Safety – CAPR 66-1

Ensure all required paperwork and safety equipment is present, intact, and current per CAPR 66-1 and Indiana Wing Supplements

Since no aircraft is currently in the custody of GLR-IN-069, this item will not be covered

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ALERT: Salmonella found in MRE packages

*The following is an email by David A. Miller, Maj, CAP,
Director of Public Affairs, Medical Officer, Missouri Wing,
CAP*

Air Force Times is reporting the bacteria **Salmonella has been found in milkshakes** in certain MRE packages. The Defense Department has **warned all military personnel not to drink these shakes.**

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ALERT: Salmonella found in MRE packages

Salmonella can cause diarrhea, abdominal pain, nausea, and vomiting. It was detected in late June during routine testing of a single lot of the milkshakes. No other lots were positive. There have been no reports of military personnel being diagnosed with salmonella.

The milkshakes are found in 2008 and 2009 MREs of beef stew, chili with beans, tuna in a pouch, and chicken and dumplings. MREs going out beginning in fiscal year 2010 should not be affected.

Often, MREs are utilized during CAP activities and events such as summer encampments. All CAP personnel are recommended to not drink these milkshakes.

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Code Phrase (part 4 of 4)

by Sam O. Nella.

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To receive credit for reviewing this Safety Briefing, please send an email to 2Lt Jim Buist at jimbuist@yahoo.com with the information on the following page.

Note that the “Code Phrase” is the combination of the four separate parts found within the briefing, following the various topics.

Metro South Composite squadron members, please also send a copy of the email to Capt Kim Nichols at hobbyhorsein@hotmail.com in addition to the email you send to 2Lt Jim Buist.

Thank you.

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Please copy and paste the following into your email, filling in the required information:

Subject Line: CAP July 2009 Safety Stand Down Day

Body of Message:

I read the Safety Stand Down Day Safety Briefing for GLR-IN-069 and GLR-IN-228, dated 9 July 2009, on-line on _____ (date).

Code Phrase: (combine the 4 separate parts from the briefing)

Name:

CAP ID: