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MEMORANDUM FOR ALL NER WING CCs AND SEs

FROM: NER/CC

SUBJECT: Heat Prostration / Heatstroke

1. With summer finally here and Ground Team activities, Cadet Encampments and real and practice missions occurring all over the Region, it's important to remember the signs of heat prostration and heatstroke, and what to do about them. I was reminded about this by a recent posting on the Internet regarding the Army's rules regarding curtailed activity during periods of high heat / humidity. There is *no* excuse for having Cadets and Senior Members working in more extreme conditions than trained and acclimated soldiers are allowed to work in. Both the Army and the Air Force use a system of "flags" to denote the current conditions. Posting these colored flags seems to me to be a good idea, particularly for Cadet Encampments. For the record, the Army guidelines are as follows:

HEAT STRESS "FLAG" CHART

Heat Category	Flag Color	Risk Level	Heat Index Degrees F	Water Qt / Hr	Work / Rest Cycles (Minutes)
①	White	Lowest	88º – 95º	½	Continuous
②	Green	Low	96º – 105º	¾	50 On / 10 Off
③	Yellow	Medium	106º – 117º	1	45 On / 15 Off
④	Red	High	118º – 126º	1½	30 On / 30 Off
⑤	Black †	Very High	127º +	2 +	20 On / 40 Off

† *Suspend all physical training and any strenuous activities.*

Note: "Rest" means minimal physical activity. Rest should only be accomplished in the shade if possible. Any activity requiring minimal physical activity can be performed during "Rest" periods, such as training by lectures or demonstration.

2. The Heat Index is a relative measure of how the body actually perceives and responds to the heat stress imposed upon it by the ambient conditions. To calculate the Heat Index, use the following table (you may want to cut these tables out and mount them on a piece of cardboard for use in the field):

HEAT INDEX CHART (TEMPERATURE & RELATIVE HUMIDITY)

R H (%)	Temperature (Degrees F)															
	90˚	91˚	92˚	93˚	94˚	95˚	96˚	97˚	98˚	99˚	100˚	101˚	102˚	103˚	104˚	105˚
90%	119˚	123˚	128˚	132˚	137˚	141˚	146˚	152˚	157˚	163˚	168˚	174˚	180˚	186˚	193˚	199˚
85%	115˚	119˚	123˚	127˚	132˚	136˚	141˚	145˚	150˚	155˚	161˚	166˚	172˚	178˚	184˚	190˚
80%	112˚	115˚	119˚	123˚	127˚	131˚	135˚	140˚	144˚	149˚	154˚	159˚	164˚	169˚	175˚	180˚
75%	109˚	112˚	115˚	119˚	122˚	126˚	130˚	134˚	138˚	143˚	147˚	152˚	156˚	161˚	166˚	171˚
70%	106˚	109˚	112˚	115˚	118˚	122˚	125˚	129˚	133˚	137˚	141˚	145˚	149˚	154˚	158˚	163˚
65%	103˚	106˚	108˚	111˚	114˚	117˚	121˚	124˚	127˚	131˚	135˚	139˚	143˚	147˚	151˚	155˚
60%	100˚	103˚	105˚	108˚	111˚	114˚	116˚	120˚	123˚	126˚	129˚	133˚	136˚	140˚	144˚	148˚
55%	98˚	100˚	103˚	105˚	107˚	110˚	113˚	115˚	118˚	121˚	124˚	127˚	131˚	134˚	137˚	141˚
50%	96˚	98˚	100˚	102˚	104˚	107˚	109˚	112˚	114˚	117˚	119˚	122˚	125˚	128˚	131˚	135˚
45%	94˚	96˚	98˚	100˚	102˚	104˚	106˚	108˚	110˚	113˚	115˚	118˚	120˚	123˚	126˚	129˚
40%	92˚	94˚	96˚	97˚	99˚	101˚	103˚	105˚	107˚	109˚	111˚	113˚	116˚	118˚	121˚	123˚
35%	91˚	92˚	94˚	95˚	97˚	98˚	100˚	102˚	104˚	106˚	107˚	109˚	112˚	114˚	116˚	118˚
30%	89˚	90˚	92˚	93˚	95˚	96˚	98˚	99˚	101˚	102˚	104˚	106˚	108˚	110˚	112˚	114˚

NOTE: *Exposure to full sunshine can increase Heat Index values by up to 15˚ F.*

> ***Example:*** If the temperature is 95˚ F and the relative humidity is 70%, the Heat Index is 122˚ F — *Red Flag* conditions. If the activity takes place in full, direct sunshine on a cloudless day, the Heat Index jumps as high as 137˚ F — well into *Black Flag* conditions.

3. Local all-news radio stations give out the humidity routinely during weather forecasts, and since relative humidity generally tends to be a wide-scale phenomenon, you are justified in using the humidity stated on the radio as the basis for your calculation if you don't have a way of determining humidity in the field. Temperature, on the other hand, is a local phenomenon, and the cheapest dime store thermometer used locally in the shade is more than adequate for the temperature part of the equation.

4. Note that the number of quarts of water per hour listed are the ***minimum*** needed to stay properly hydrated in the conditions specified. ***Don't wait until you are thirsty to drink***. More water is always better!

5. Ground Team Leaders, flightline personnel and anyone supervising Cadets should learn to identify the symptoms of heatstroke or heat prostration (not all may be present in every individual):

- Weakness
- Fatigue
- Dizziness
- Headache
- Apathy
- Sleepiness
- Fever
- Dry Mouth & Nasal Passages
- Urine Dark In Color / Reduced Volume
- Loss Of Appetite
- Lagging Pace
- Impatience / Emotional Instability

When you stop sweating, that's a SERIOUS danger signal that your system's mechanism for getting rid of excess heat is shutting down.

6. Remind everyone to stay well hydrated by drinking plenty of water, wear a hat or other head protection whenever possible, and not to push themselves when the temperatures are over 90˚ F or the Heat Index is over 106˚ F. There's no excuse for ***anyone*** to have to leave a CAP activity in an ambulance due to heatstroke!

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cc: HQ CAP/DO
HQ CAP/DOR