MEMORANDUM FOR JROTC STAFF

SUBJECT: Hot Weather Injuries

1. The weather is warming up, and summer heat will arrive before we know it. Now is the time to start thinking about preventing heat injuries in yourself and your cadets.

2. The incidence of heat stroke hospitalization in the US Army has increased eight-fold during the last 20 years, according to the latest Army Heat Injury Prevention Policy Memorandum. Heat injuries can occur on campuses and operational environments such as JCLC, during unit and individual physical training, recreational events and non-exertion activities. They are a threat to you and to the fitness of individual Cadets.

3. JCLC Commandants and instructors are charged with putting in place the necessary measures to prevent heat injuries. Medical personnel also have a key role in supporting the leadership in their efforts to protect all personnel. Individual Cadets also play a part by following the guidance they are given and paying attention to warning signs in themselves and other Cadets.


5. The variables of climate (temperature and humidity), intensity of activity and individual risk factors interact to cause a heat injury. Individual risk factors include lack of heat acclimatization, cumulative exposure to heat, poor physical fitness, overweight, concurrent illness, medications/dietary supplements, prior history of heat injury, and skin disorders. Beverages containing caffeine used within 48 hours of training increase heat injury risk. Cadets, especially those from cool climates that are not properly heat acclimatized, are more at risk of becoming a heat casualty when exposed to hot weather.
6. Too much drinking water is also a risk. A number of deaths have occurred in the Army due to water intoxication, an electrolyte disturbance in which the sodium concentration in the plasma is too low. Proper water consumption guidelines should be followed in order to prevent over-hydration. Fluid needs can vary based on individual differences (± 1/4 qt/hr) and exposure to full sun or full shade (± 1/4 qt/hr). Hourly fluid intake should not exceed 1-1/2 quarts and daily intake should not exceed 12 quarts.

7. It is essential that JCLC commandants, and instructors are educated on preventing heat injuries and implement a risk management-based, comprehensive heat injury prevention program. Programs must include identification and assessment of hazards in terms of severity and probability, implementation of appropriate controls for hazard abatement, and evaluation of the effectiveness of control measures. Early recognition of heat exhaustion is critical to prevent progression to more serious heat injury and death. Attached is a power point presentation to support this initiative.

**Heat Injury Prevention**

Now that summer is upon us, precautions must be taken to protect ourselves from the summer heat. Everyone is at risk when temperatures rise above 90 degrees. Heat-related illnesses can cause serious injury and even death if unattended. In fact, extreme summer heat causes more fatalities in the U.S. per year than any other weather-related factor, including floods, lightning, tornadoes, hurricanes, and winter storms. However, the following preventative measures can help you to avoid heat related injuries.

1. **Drink plenty of fluids.** In hot environments, it is possible for the body to lose one liter of fluid per hour. Thirst is not a good indicator of fluid loss. Don’t wait until you are thirsty to drink fluids. Urine color should be light yellow.

2. **Be aware of your environment.** If you work in the heat or around heat sources, take whatever steps are possible to control the heat externally.
3. **Take frequent breaks.** As the temperature increases, more frequent breaks are needed to stay cool.
4. **Wear proper clothing.** Loose, lightweight fabrics encourage heat release.
5. **Acclimatize.** It takes at least 7-10 days to get used to working in a hot environment.
6. **Stay in shape.** A healthy heart and good muscle tone work more efficiently and generate less heat.
7. **Eat light during the workday.** Hot, heavy meals add heat to the body and divert blood flow to aid with digestion. Normal dietary intake typically replaces all salt lost during the day, so there is no need to take salt supplements.
8. **Be aware of special heat stress risk.** Caffeine, alcohol, diabetes, or medications for high blood pressure and allergies can increase the risk of heat stress.

When the body is unable to cool itself through sweating, serious heat illness may occur. The most severe heat-induced illnesses are heat exhaustion and heat stroke. If action is not taken to treat heat exhaustion, the illness could progress to heat stroke and possible death. The following are symptoms and treatments for these heat related illnesses:

### Heat Exhaustion

**Symptoms:**

Headaches, dizziness/Lightheadedness, weakness, mood changes (irritable or confused/can’t think straight), feeling sick to your stomach, vomiting/throwing up, decreased and dark-colored urine, fainting/passing out, pale and clammy skin.

**Treatment:**

- Move the person to a cool, shaded area to rest. Don’t leave the person alone. If the person is dizzy or lightheaded, lay them on their back and raise their legs about 6-8 inches. If the person is sick to their stomach, lay them on their side.
- Loosen and remove any heavy clothing.
- Have the person drink some cool water (a small cup every 15 minutes) if they are not feeling sick to the stomach.
- Try to cool the person by fanning them. Cool the skin with a cool spray mist of water or wet cloth.
- If they do not feel better in a few minutes, call for emergency help (ambulance or 911).

If heat exhaustion is not treated, the illness may advance to heat stroke.
Heat Stroke – A medical emergency

Symptoms:

Dry, pale skin (no sweating), hot, red skin (looks like a sunburn), mood changes (irritable, confused/not making any sense), seizures/fits; collapse/passed out (no response).

Treatment:

- Call for emergency help (ambulance or 911).
- Move the person to a cool shaded area. Don’t leave the person alone. Lay them on their back, and if the person is having seizures/fits, remove any object close to them so they won’t strike against them. If the person is sick to their stomach, lay them on their side.
- Remove any heavy and outer clothing.
- Have the person drink some cool water (a small cup every 15 minutes) if they are alert enough to drink anything and not feeling sick to the stomach.
- Try to cool the person by fanning them. Cool the skin with a cool spray mist of water, wet cloth, or wet sheet.
- If ice is available, place ice packs under the armpits and groin area

8. POC for this action is Dr. Svoboda, Chief, Training & Operations, (502) 624-2075, or e-mail: william.svobada@usacc.army.mil.