



FIGHTING THE HEAT

Methods, Procedures, and Standards on Ensuring Soldiers are Combat Effective in Austere Conditions.

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ABSTRACT

Using lessons learned from current conflicts and JRTC 24-10, 1-26 IN BN develops tactics and procedures to increase survivability of the Mobile Air Assault Rifle Platoon.

This white paper examines the methods, procedures, and standards of heat mitigation in non-permissive combat environments. Some of these categories include load plans, heat conditioning, nutrition, and high-risk Soldier identification through the scope of combat effectiveness at the Platoon level.

In modern military operations, sustainment and endurance play an integral role in remaining lethal and combat effective in Large Scale Combat Operations (LSCO). A Soldier's physical fitness and persistence while operating in austere weather conditions is indicative of a unit's priority of weather proofing and endurance-focused training. Prior to JRTC 24-10, units transitioned to reverse cycle Physical Training, conducted in the afternoon and typically during the hottest part of the day. This approach to weather-proofing Soldiers proved to be effective while also leaving much room for improvement.

Although there was no designated control group for JRTC 24-10 which did not conduct reverse cycle PT, the consensus remains that weather proofing prior to JRTC had the profound benefit of conditioning Soldiers to operate in hot temperatures with an elevated heart rate. In addition, certain factors may be manipulated to further improve effectiveness of weather proofing such as intensity of workouts, workouts under combat loads, and duration of workouts to increase high temperature exposure. Although the preceding factor manipulations improved the effectiveness of weather proofing, other factors (i.e. soldier load, prior heat casualty identification, and nutrition) still led to high volumes of heat casualties.

LESSONS LEARNED

One of the leading causes to heat casualties was poor load plans for Soldier's individual equipment. As the ISVs were introduced to the Mobility Brigade Combat Team structure, units found it was easier to cover more distance faster than before. As a result, the concept of "fight light" found in traditional light infantry units was compromised. Soldiers and leaders across all formations knew they could have heavier rucks loaded with more non-mission essential items (i.e. energy drinks, candy and other snacks, etc.) because the rucks will stay with the vehicle. This knowledge became problematic when vehicles were suddenly inoperable, or when the mission dictated that Soldiers move with their equipment. When forced to dismount, they were not prepared to carry their combat load plus a significant amount

of additional weight in the grueling heat. The problem underscores the need for leaders to be involved with the PCC/ PCI process and reevaluate which items are mission essential, and which are not without compromising safety or combat effectiveness, to include type of clothing. Spandex undergarments were found on most heat casualties and should be checked prior to field events because of the ability of the material to trap heat close to the Soldiers' core. This evaluation should be done on every item the soldier may have to carry (rucks, commo equipment, OCIE, assault pack "Go Bags," additional clothing, etc.).

CPT Davis Ponder, Commander of Charger Company, 2-502 IN stated he had one heat casualty the entire JRTC rotation. He attributes this success to his emphasis on minimizing and inspecting his Soldiers' required combat

equipment. At any point, his Soldiers were carrying a maximum weight of 45 lbs including seven quarts of water, one First Strike MRE, the Unit Basic Load of ammunition, and any required Platoon equipment for the mission. Conversely, other units averaged around 75 lbs of combat equipment, which exceeded Charger Company's average by over 30 lbs. CPT Ponder also used his STEED to distribute Soldier Load by loading it with additional CLI and CLV. Lastly, CPT Ponder deliberately planned the use of equipment caches during missions requiring Soldiers to carry increased loads, such as during the Long-Range Large-Scale Air Assault.



Soldier setting up a camo net for concealment from the enemy and heat mitigation.

Another factor that led to a high number of heat casualties was individual Soldier nutrition leading up to and during JRTC. Maintaining temperature in adverse weather requires increased caloric intake – including essential micronutrients. One of the main reasons Soldiers were suffering from heat was lack of calories or electrolytes to sustain the physical requirements of the body's output. While water intake was emphasized at the leader level, hyponatremia was also a factor of heat injury. Ensuring Soldiers are consuming enough electrolytes and sodium in high temperatures is vital to nutrition and hydration. Proper nutritional intake requires leader emphasis in all phases of an operation.

In addition to proper nutrition to mitigate heat casualties, properly planned workouts are an important element of climatization training. While the positives associated with afternoon Physical Training are self-evident, there are ways to maximize the effectiveness of these workouts to ensure Soldiers are as physically prepared as they can be. More times than not, these workouts tended to be an after-thought for JRTC prep. Integrating H2F experts into building focused plans for units may have yielded better

results due to their preparation specificity. Additionally, it is essential when conducting climatization training to ensure all phases of the workout are conducted while exposed to the elements, especially the cooldown period.

Finally, prior heat casualties accounted for a large majority of Soldiers that were removed from training due to heat injuries. This population should be closely scrutinized when analyzing combat effectiveness with the understanding that these Soldiers need to be monitored and have load plans tailored to prevent future injuries. Additionally, sending Soldiers back out to the field after they were treated for heat injuries proved to be extremely counterproductive and placed these Soldiers at risk for future weather-related injuries. Emphasis for the treatment of heat injuries needs to be placed on Soldiers' ability to self-regulate their own body temperature. This is a skill, built and honed like any other. Introduction of ice sheets too early robs Soldiers of their ability to build the physiological skills to self-regulate.



Soldier using a dunking station during preparation activities prior to entering the box.

CONCLUSION

To build on realized successes at JRTC, units must continue to conduct proper weather analysis and prioritize the opportunity for their Soldiers to heat proof prior to conducting enduring military operations in contentious combat environments. Holistically, the Battalion may increase combat effectiveness in austere conditions by conducting more deliberate climate-focused training through the implementation of H2F based preparation, increase the exposure of Soldiers operating in austere climates, and ensuring Soldiers' nutrition is supportive of the physical performance required to survive, persist, and dominate the battlefield.

AUTHOR

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