

# Heat Injury Controls



## Decision to accept risk is made at the appropriate level

- Made in accordance with TRADOC Reg 385-2, para 1-5e.



## Identified controls are in place

- Update WBGT hourly.
- Adhere to work/rest cycle in high heat categories.
- Run in formation at a double arm interval (the extra space is very effective to allow individual heat dissipation during runs).
- For tasks requiring continuous effort, adhere to the Continuous Work/Water Consumption Guide (without rest) and other standardized guidelines for warm weather training conditions. Allow several hours of rest afterwards.



## Monitor and enforce hydration standard

- Encourage frequent drinking. Do not exceed 1 1/2 quarts per hour or 12 quarts per day. Make water more palatable, if possible, by cooling.
- Do not allow Soldiers or Trainees to empty canteens to lighten load (consider imposing a penalty in time events).
- Ensure Soldiers are well hydrated before training. Ask about urine - urine is clear if well hydrated.
- Check Riley (water) Card or Ogden Card frequently.



## Monitor and enforce eating of meals

- Ensure all meals are eaten during the meal break.
- Ensure adequate time to eat and drink meals.
- Table salt may be added to food when the heat category is high. Salt tablets are not recommended.



## Execute random checks

- Spot checks by Cadre, Senior NCO's, and Drill Instructors.
- Enforce battle buddy checks — need to be aware of each other's eating, drinking and frequency of urination.
- Plan placement of leaders to observe and react to heat casualties in dispersed training.



## Follow clothing recommendations

- Heat category 1-2: No restrictions.
- Heat category 3: Unblouse trouser legs, unbuckle web belt.
- Heat category 4-5:
  - » Unblouse trouser legs, unbuckle web belt.
  - » Remove t-shirt from under BDU top or remove BDU top down to t-shirt (depends whether biting insects are present).
  - » Remove helmets unless there are specific safety reasons to keep them on (ex: range).
- MOPP 4: Add 10°F to WBGT index for easy work, and 20°F to WBGT index for moderate and hard work.
- Body Armor: Add 5°F to WBGT index.

**Have Soldiers take cold showers after moderate and heavy work with category 3 and above at the end of the day. This will minimize cumulative thermal load.**

# Work/Rest and Water Consumption Table

Applies to average sized, heat-acclimated Soldier wearing ACU, hot weather. (See TB MED 507 for further guidance.)

Heat Category	WBGT Index, F°	Easy Work		Moderate Work		Hard Work	
		Work/Rest (min)	Water Intake (qt/hr)	Work/Rest (min)	Water Intake (qt/hr)	Work/Rest (min)	Water Intake (qt/hr)
1	78° - 81.9°	NL	½	NL	¾	40/20 min	¾
2 (green)	82° - 84.9°	NL	½	50/10 min	¾	30/30 min	1
3 (yellow)	85° - 87.9°	NL	¾	40/20 min	¾	30/30 min	1
4 (red)	88° - 89.9°	NL	¾	30/30 min	¾	20/40 min	1
5 (black)	> 90°	50/10 min	1	20/40 min	1	10/50 min	1

Easy Work	Moderate Work	Hard Work
<ul style="list-style-type: none"> <li>• Weapon Maintenance</li> <li>• Walking Hard Surface at 2.5 mph, &lt; 30 lb Load</li> <li>• Marksmanship Training</li> <li>• Drill and Ceremony</li> <li>• Manual of Arms</li> </ul>	<ul style="list-style-type: none"> <li>• Walking Loose Sand at 2.5 mph, No Load</li> <li>• Walking Hard Surface at 3.5 mph, &lt; 40 lb Load</li> <li>• Calisthenics</li> <li>• Patrolling</li> <li>• Individual Movement Techniques, i.e., Low Crawl or High Crawl</li> <li>• Defensive Position Construction</li> </ul>	<ul style="list-style-type: none"> <li>• Walking Hard Surface at 3.5 mph, ≥ 40 lb Load</li> <li>• Walking Loose Sand at 2.5 mph with Load</li> <li>• Field Assaults</li> </ul>

- The work/rest times and fluid replacement volumes will sustain performance and hydration for at least 4 hrs of work in the specified heat category. Fluid needs can vary based on individual differences (± ¼ qt/hr) and exposure to full sun or full shade (± ¼ qt/hr).
- NL = no limit to work time per hr.
- Rest = minimal physical activity (sitting or standing) accomplished in shade if possible.
- **CAUTION: Hourly fluid intake should not exceed 1½ qts. Daily fluid intake should not exceed 12 qts.**
- If wearing body armor, add 5°F to WBGT index in humid climates.
- If doing Easy Work and wearing NBC (MOPP 4) clothing, add 10°F to WBGT index.
- If doing Moderate or Hard Work and wearing NBC (MOPP 4) clothing, add 20°F to WBGT index.

For additional copies, contact: U.S. Army Public Health Command Health Information Operations Division at (800) 222-9698 or USAPHC - Health Information Operations@apg.amedd.army.mil. For electronic versions, see <http://chppm-www.apgaa.army.mil/heat>. Distribution unlimited. Local reproduction is authorized. CP-033-0811



<http://phc.amedd.army.mil>  
1-800-222-9698