

Heat Stress Card

Fluid Replacement Guidelines for Warm Weather Training Conditions

Acclimated after approx. two weeks training wearing BDU, hot weather

High Risk for Heat Illness: (The more factors, the higher the risk)

- **Not acclimatized** to heat (need 10-14 days to get trainees adequately acclimated)
- Poor fitness
- Exceeds Body Fat Standard
- Cumulative inadequate hydration (day to day)
- Minor illness (cold symptoms, sore throat, low grade fever)
- Taking drugs/supplements/dietary aids
Ex: Allergy or cold remedies
Ephedra supplement
- Use of alcohol in the last 24 hours
- Prior history of heat illness (any heat stroke, or >2 episodes of heat exhaustion)
- Skin disorders such as heat rash and sun burn which prevent effective sweating
- Age > 40 years

Do:

Maintain the buddy system to look out for each other.

Observe soldiers drinking water in required amounts not to exceed 1½ quarts per hour or 12 quarts per day.

Ensure adherence to work rest cycle in heat categories.

Ensure soldiers are well hydrated before starting hard work.

Ensure soldiers have adequate time to eat and drink.

Encourage soldiers to eat all meals for needed salts.

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

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

Heat Category	WBGT Index, F°	Easy Work		Moderate Work		Hard Work	
		Work/Rest	Water Intake (Qt/H)	Work/Rest	Water Intake (Qt/H)	Work/Rest	Water Intake (Qt/H)
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

Warning Signs and Symptoms of Heat Stress and Illness

With any of the below symptoms or signs, immediately call for medical evaluation by a 91W (Medic). If 91W is not immediately available, call for Medevac or ambulance.



INDICATIONS OF POSSIBLE HEAT ILLNESS	
<p>MORE COMMON SIGNS / SYMPTOMS</p> <ul style="list-style-type: none"> • Dizziness • Headache • Dry mouth • Nausea • Unsteady walk • Weakness • Muscle cramps 	<p>IMMEDIATE ACTIONS</p> <ul style="list-style-type: none"> • Remove from training • Allow casualty to rest in shade • Take sips of water • While doing the above, call for Medic evaluation of the soldier (Medic will monitor temperature and check for mental confusion) • If no medic is available call for ambulance or Medevac
<p>SERIOUS SIGNS/ SYMPTOMS</p> <ul style="list-style-type: none"> • Hot body, high temperature • Confusion (Do Mental Status Assessment) • Vomiting • Involuntary bowel movement • Convulsions • Weak or rapid pulse • Unresponsiveness, coma 	<p>Immediately call Medevac or ambulance for emergent transport while doing the following:</p> <ul style="list-style-type: none"> • Lay person down in shade with feet elevated until Medevac or ambulance arrives • Undress as much as possible • Pour cool water over person and fan • Give sips of water while awaiting ambulance (if conscious) • Monitor airway and breathing until ambulance or Medevac arrive

MENTAL STATUS ASSESSMENT
<p>A sign that the soldier is in a serious life-threatening condition is the presence of mental confusion (with or without increased temperature). Anyone can do a mental status assessment asking some simple questions:</p> <p>Call for emergency Medevac or ambulance if any of the following exist:</p> <p>What is your name? (Does not know their name.)</p> <p>What month is it? What year is it? (Does not know the month or year.)</p> <p>Where are we/you? (Does not know the place where they are at.)</p> <p>What were you doing before you became ill? (Does not know the events that led to the present situation.)</p>