

INDIVIDUAL SAFETY CARD

BASIC HEAT INJURY PREVENTION

1. Consider water a tactical weapon. Drink frequently (see page 2).
2. Eat meals. Add salt to taste.
3. Be aware that dark yellow, infrequent urination is a sign of dehydration. Increase water intake.
4. Perform heavy work in the cooler hours of the day, such as early morning or late evening, if possible.
5. Minimize heat stress by decreasing the work pace and/or increasing rest periods (see page 2).
6. Be aware that full heat acclimatization takes 1 to weeks.
7. Consider that soldiers undergoing treatment for acute or chronic medical conditions may be at greater risk for heat injury.

HEAT CRAMPS

Symptoms	First Aid
<ol style="list-style-type: none">1. Muscle cramps (arms, legs, and/or stomach)2. Heavy sweating (wet skin)3. Extreme thirst	<ol style="list-style-type: none">1. Move the soldier to a shady area, and loosen his clothing.¹2. Have the soldier drink a sports drink or at least one canteen of water mixed with a packet of salt (1/4 teaspoon).3. Watch the soldier. Continue to give him water if he accepts it.4. Get medical help if cramps continue.

¹When in a chemical environment, do not loosen/remove clothing.

HEAT EXHAUSTION

Symptoms	First Aid
<ol style="list-style-type: none">1. Heavy swelling with pale, moist, cool, or hot skin2. Weakness3. Dizziness4. Fatigue5. Heat cramps6. Nausea (with or without vomiting/diarrhea)7. Tunnel vision8. Chills (gooseflesh)9. Rapid breathing10. Confusion11. Tingling of the hands and/or feet	<ol style="list-style-type: none">1. Move the soldier to a cool, shady area, and loosen/remove his clothing.¹2. Pour water on the soldier, and fan him to permit a cooling affect.3. Have the soldier slowly drink at least one full canteen of water.4. Elevate the soldier's legs.5. Get medical help if symptoms continue.6. Watch the soldier until symptoms are gone or until medical help arrives.

¹When in a chemical environment, do not loosen/remove clothing.

2 December 2002

Headquarters, Department of the Army

DISTRIBUTION RESTRICTION: Approved for public release; distribution is unlimited.

*This publication supersedes GTA 5-8-12, 25 February 1999.

HEATSTROKE

DANGER

HEATSTROKE IS A MEDICAL EMERGENCY, EVACUATE THE SOLDIER TO A MEDICAL FACILITY IMMEDIATELY, AND REDUCE HIS BODY TEMPERATURE.

Symptoms	First Aid
<ol style="list-style-type: none"> 1. Hot 2. Disoriented 3. Delirious 4. Unconscious 5. Heat exhaustion (see page 1) 6. No sweating (red, flushed, hot, dry skin) 	<ol style="list-style-type: none"> 1. Move the soldier to a cool, shady area, and loosen/remove his clothing (remove outer and/or protective clothing if the situation permits). 2. Start cooling the soldier immediately. Immerse him in water, fan to cool him, and massage his extremities and skin with cool water. 3. Elevate the soldier's legs. 4. Have the soldier slowly drink one full canteen of cool water if he is conscious.

¹When in a chemical environment, do not loosen/remove clothing.

WORK/REST/WATER CONSUMPTION

Heat Cat	WBGT ¹	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 to 81.9° F	NL	1/2	NL	3/4	40/20	3/4
2 (Green)	82 to 84.9° F	NL	1/2	50/10	3/4	30/30	1
3 (Yellow)	85 to 87.9° F	NL	3/4	40/20	3/4	30/30	1
4 (Red)	88 to 89.9° F	NL	3/4	30/30	3/4	20/40	1
5 (Black)	>90° F	50/10	1	20/40	1	10/50	1

CAUTION

Hourly fluid intake should not exceed 1½ quarts. Daily fluid intake should not exceed 12 quarts.

¹If wearing body armor, add 5° F to the WBGT; the MOPP overgarment, add 10° F.

NOTES:

1. Rest times and fluid replacement volumes will sustain performance and hydration for at least 4 hours of work in the specific heat category. Individual water needs will vary ± ¼ quart per hour.
2. NL = No limit to work time per hour.
3. Rest means minimal physical activity (sitting or standing) and should be accomplished in the shade if possible.

EXAMPLES

Easy Work	Moderate Work	Hard Work
<ol style="list-style-type: none"> 1. Weapon maintenance 2. Walking on a hard surface, 2.5 mph, ≥30-lb load 3. Manual of arms 4. Drill and ceremony 	<ol style="list-style-type: none"> 1. Walking in loose sand, 2.5 mph, no load 2. Walking on a hard surface, 3.5 mph, <40-lb load 3. Calisthenics 4. Marksmanship training 5. Patrolling 	<ol style="list-style-type: none"> 1. Walking in loose sand, 2.5 mph, any load 2. Walking on a hard surface, 3.5 mph, ≥ 40-lb load 3. Individual movement techniques (low/high crawl) 4. Defense position construction 5. Field assaults 6. Rifle bayonet training 7. Road march, >4 mph

PREVENTION OF COLD INJURIES DUE TO WINDCHILL

When the windchill is -	And your training is —	You should be —	And extended breaks are —
CAT I +32 to +1° F	Stationary	Fully dressed	At the commander's discretion
	Physically active	Partially dressed	Not recommended
CAT II 0 to -5° F	Stationary	Fully dressed	Recommended
	Physically active	Partially dressed	Not recommended
CAT II 0 to -10° F	Stationary	Fully dressed	Recommended
	Physically active	Fully dressed	Not recommended
CAT IV Below -10° F	Discontinue outside training.		

BASIC COLD INJURY PREVENTION

1. Wear sufficient clothing and equipment to keep our body warm. Dress in layers.
2. Avoid prolonged exposure of unprotected skin to extreme cold and/or windy conditions (see page 4).
3. Keep clothing and equipment as dry as possible. Change socks at least daily or more often if they are damp.
4. Keep clothing loose so that circulation is not decreased.
5. Remove clothing layers, as appropriate, to limit sweating during activity.
6. Eat hot meals, and drink hot liquids. Maintain food and fluid intake.
7. Be aware that the risk of cold injury increases in wet weather or when wearing wet clothing, particularly if the windchill is 40° F or below.

DEFINITIONS

Windchill	The cooling power of wind on exposed flesh expressed as an equivalent temperature under calm conditions.
Fully Dressed	Wearing long underwear, field pants, overshoes, gloves or trigger finger mittens (when available), and a pile cap.
Partially Dressed	Wearing gloves and a pile cap—no long underwear, field pants, or overshoes.
Extended Breaks	A maximum of 20 minutes continuous training with interspersed 10-minute breaks to visit warming facilities and drink hot liquids.
Stationary Activity	Maintaining a fixed position, such as bleacher instruction, basic rifle marksmanship, and ceremonies.

INSTRUCTIONS: Measure the temperature and wind speed if possible; if not, estimate them. Enter the table at the closest 5 F interval along the top, and follow it down to the appropriate wind speed along the left side. The intersection gives the approximate equivalent chill temperature—that is, the temperature that would cause the same rate of cooling under calm conditions. Wind velocity can be caused by equipment and individual movement. Covering bare skin reduces the risk of cold injury.

WINDCHILL CHART

Temperature (°F)

Calm	40	35	30	25	20	15	10	5	0	-5	-10	-15	-20	-25	-30	-35	-40	-45
5	36	31	25	19	13	7	1	-5	-11	-16	-22	-28	-34	-40	-46	-52	-57	-63
10	34	27	21	15	9	3	-4	-10	-16	-22	-28	-35	-41	-47	-53	-59	-66	-72
15	32	25	19	13	6	0	-7	-13	-19	-26	-32	-39	-45	-51	-58	-64	-71	-77
20	30	24	17	11	4	-2	-9	-15	-22	-29	-35	-42	-48	-55	-61	-68	-74	-81
25	29	23	16	9	3	-4	-11	-17	-24	-31	-37	-44	-51	-58	-64	-71	-78	-84
30	28	22	15	8	1	-5	-12	-19	-26	-33	-39	-46	-53	-60	-67	-73	-80	-87
35	28	21	14	7	0	-7	-14	-21	-27	-34	-41	-48	-55	-62	-69	-76	-82	-89
40	27	20	13	6	-1	-8	-15	-22	-29	-36	-43	-50	-57	-64	-71	-78	-84	-91
45	26	19	12	5	-2	-9	-16	-23	-30	-37	-44	-51	-58	-65	-72	-79	-86	-93
50	26	19	12	4	-3	-10	-17	-24	-31	-38	-45	-52	-60	-67	-74	-81	-88	-95
55	25	18	11	4	-3	-11	-18	-25	-32	-39	-46	-54	-61	-68	-75	-82	-89	-97
60	25	17	10	3	-4	-11	-19	-26	-33	-40	-48	-55	-62	-69	-76	-84	-91	-98

Frostbite Times:  Little Danger  30 min  10 min  5 min

$$\text{Windchill (°F)} = 35.74 + 0.6215T - 3.75(V^{0.16}) + 0.4275T(V^{0.16})$$

Where: T = Air Temperature (°F) and V = Wind Speed (mph)

Symptoms	First Aid
HYPOTHERMIA	
<ol style="list-style-type: none"> Confusion Bizarre behavior Withdrawal from group interaction Unconsciousness with nearly undetectable breathing and pulse 	<p style="text-align: center;">DANGER</p> <p style="text-align: center;">THIS IS A MEDICAL EMERGENCY.</p> <ol style="list-style-type: none"> Evacuate for medical treatment. Prevent further cold exposure. Remove wet clothing. Rewarm by covering with blankets or sleeping bags.
FROSTBITE	
<p>Skin that is numb, turns grey or waxy white, and feels cold and stiff to the touch</p>	<ol style="list-style-type: none"> Prevent further cold exposure. Remove wet and constrictive clothing. Rewarm the injured site gradually by direct skin-to-skin contact or a modest heat source. Evacuate for medical treatment.
TRENCHFOOT	
<ol style="list-style-type: none"> Itching, numbing or tingling pain Feet that are swollen and turn faintly red, blue, or black 	<ol style="list-style-type: none"> Prevent further cold exposure. Remove wet and constrictive clothing. Wash and dry the foot gently. Elevate the foot. Cover the foot with layers of loose, warm clothing; and allow it to rewarm. Do not massage the foot or expose it to extreme heat. Do not walk on the foot.

INJURY PREVENTION FOR MOPP TRAINING

MOPP Level	Protective Overgarment	Protective Foot Covers	Mask With Hood	Protective Gloves
0	Readily available	Readily available	Carried	Readily available
1	Worn	Carried	Carried	Carried
2	Worn	Worn	Carried	Carried
3	Worn	Worn	Worn	Carried
4	Worn	Worn	Worn	Worn

VARIATIONS OF MOPP

Work Rate	<50°F WBGT	50 to 70°F WBGT	70 to 78°F WBGT
Low¹	Wear full protective clothing and equipment.	Open hood clothing progressively.	<ol style="list-style-type: none"> 1. Remove and carry mask, hood, and gloves. 2. Remove some protective clothing.
Moderate²	Wear full protective clothing and equipment.	<ol style="list-style-type: none"> 1. Remove and carry mask, hood, and gloves. 2. Open protective clothing and duty uniform. 	<ol style="list-style-type: none"> 1. Remove and carry mask, hood, and gloves. 2. Remove some protective clothing.
Heavy³	<ol style="list-style-type: none"> 1. Remove and carry mask, hood, and gloves. 2. Open and remove some protective clothing progressively. 	<ol style="list-style-type: none"> 1. Remove and carry mask, hood, and gloves. 2. Remove some protective clothing. 	<ol style="list-style-type: none"> 1. Remove and carry mask, hood, and gloves. 2. Remove protective clothing.

¹Motorized movement or administrative work, resting in place, classroom activities, and most work in administrative areas.

²Improving positions or bivouac sites, very light digging, area police, dismounted drills, cleaning weapons, and driving vehicles.

³Dismounted assault or force marching, patrolling or force marching carry field gear, litter bearing, bridge building, and carrying equipment heavier than 45 pounds.

VARIATIONS OF MOPP

WBGT ²	Low	Moderate	Heavy
>78° F	Do not train in MOPP 4.	Do not train in MOPP 4.	Do not train in MOPP 4.
70 to 78° F	No MOPP restrictions	30 min/25 min³	Do not do heavy work.
50 to 70° F	No MOPP restrictions	40 min/20 min³	20 min/25 min³
<50° F	No MOPP restrictions	No MOPP restrictions	No MOPP restrictions

¹Permanent party MOPP training will be conducted using the guidance shown in FM 3-4. This GTA will be used as a general guide only. Acclimatization to MOPP training and the physical condition of personnel are primary factors used when planning MOPP training exercises.

²NBC protective clothing adds 10° F to the measured WBGT.

³The work/rest period.

NOTE: Soldiers should drink at least 5 quarts of water per day when the WBGT is less than 80° F and 13 quarts per day when the WBGT is more than 80° F

PREVENTIVE ACTIONS IN ADVERSE WEATHER

Lighting Storm	Tornado
<ol style="list-style-type: none">1. Take cover inside grounded buildings if available.2. Seek low-lying areas (valleys, ditches, covers, foxholes).3. Avoid bare ridges on hilltops.4. Avoid standing under a single, tall tree or in water.5. Stack weapons, and disperse personnel.6. Avoid tents and vehicles with cloth tops.7. Avoid items of good conductivity (wire, water, weapons, antennas, equipment, shovels, and radios).	<ol style="list-style-type: none">1. If a tornado is sighted while on a range or in a training area, move away from its path at a right angle.2. If there is not enough time to escape, lie flat in the nearest depression.3. If you are in a building, go to the basement or the lowest-level, internal hallway.