UNITED STATES MARINE CORPS
III MARINE EXPEDITIONARY FORCE, FMF
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AND
MARINE CORPS INSTALLATIONS PACIFIC-MCB CAMP BUTLER
UNIT 35001
FPO AP 96373-5001

III MEF/MCIPAC-MCBBO 6200.1B
SAF

JAN 2 2 2024

III MARINE EXPEDITIONARY FORCE/MARINE CORPS INSTALLATIONS PACIFIC-MCB CAMP BUTLER ORDER 6200.1B

From: Commanding General, III Marine Expeditionary Force
Commanding General, Marine Corps Installations Pacific-MCB Camp Butler
To: Distribution List

Subj: III MARINE EXPEDITIONARY FORCE/MARINE CORPS INSTALLATIONS PACIFIC-MCB CAMP BUTLER HEAT AND COLD STRESS INJURY PREVENTION PROGRAM

Ref: (a) MCO 5100.29C
(b) MARADMIN 111/15
(c) NEHC-TM-OEM 6260.6A
(d) DHA, Armed Forces Reportable Medical Events, Oct 2022

Encl: (1) Heat Flag Locations
(2) Heat Flag Activity Limitations
(3) Heat Casualty Care
(4) Work/Rest Ratios and Fluid Replacement Guide
(5) Physical Conditioning and Acclimatization Programs
(6) Cold Casualty Care
(7) Report of Heat/Cold Injury

1. Situation. This Order provides policy, assigns responsibilities, and establishes guidelines to prevent and manage Heat and Cold Injury for III Marine Expeditionary Force (MEF), Marine Corps Installations Pacific-MCB Camp Butler (MCIPAC-MCBB) and tenant activities.

a. Heat Stress Injuries are common risk and frequent occurrence in the training environment. These injuries can lead to permanent disability or death of the injured person. Cold stress injuries are no less potentially disabling or fatal. Risk of these potentially avoidable outcomes is decreased through prevention and appropriate management of all injuries by line and supporting health services personnel throughout the chain of command.

b. Heat stress injuries are most often associated with physical exertion in a hot and humid environment but can occur in any climate. Primary prevention relies upon early identification and mitigation of risk factors in individuals and the environment. Secondary prevention involves correctly identifying and interpreting signs of impending injury in individuals and responding appropriately. These steps can be performed by all personnel to varying extents based upon their level of training.

c. Upon the occurrence of a heat casualty, response and management begin and must be initiated rapidly at the point of injury. Initial management may be performed by line or health services staff with the appropriate training. Responding to and managing these casualties can be overwhelming, especially for first responders. Establishing core knowledge and conducting regular follow on training for all applicable personnel in both means of attack – prevention and response/management – against these injuries provides the tools necessary to potentially avoid disabling and fatal outcomes.

2. Cancellation. III MEF/MCIPAC-MCBBO 6200.1A

3. Mission. Per the references, provide policy, assign responsibilities, and establish guidelines for the prevention, identification, and management of these injuries for III Marine Expeditionary Force (MEF), Marine Corps Installations Pacific-MCB Camp Butler (MCIPAC-MCBB) and tenant activities. Per the references, establish procedures for the notification and tracking process of heat and cold conditions.

4. Execution

a. Commander's Intent and Concept of Operations

(1) Commander's Intent. Commanders at all levels are responsible for the training and execution of prevention, identification, response, and management for all heat and cold stress injuries within their commands, as described in this Order.

(a) Heat injuries commonly occur during times of high ambient temperature and humidity. The risk is increased during summer and often parts of the adjoining seasons in tropical and subtropical areas. In Okinawa, this occurs most frequently between 1 May and 31 October. Dates for similar climate circumstances may be different for MCIPAC-MCBB Installations outside of Okinawa. In this Order, this period of highest contribution of the average weather conditions to potential heat injury is described as the "heat season". This nomenclature does not imply that heat injuries are unlikely during other times each year. It only indicates that the climate may play less of a role in the incidence of heat casualties. It is important to be aware that heat injury can occur outside these date ranges and to remain vigilant in prevention measures and preparedness for response/management.

(b) Cold injuries are a risk in environments and situations that decrease the core temperature of the whole person or one or more areas of their body, for example, training in cold weather or in cold water.

(c) All personnel will use Risk Management (RM) per reference (a) for exercises, physical training, and warm/cold weather operations year-round to prevent Heat and Cold Stress Injury incidents within their command.

(2) Concept of Operations. Commanding Officers and Officers-in-Charge (OIC) shall support their respective Heat Stress System and Injury Prevention Program through:

(a) Properly posting and disseminating heat stress conditions/information as appropriate, and receiving units properly adhere to identified heat conditions.

(b) Obtaining local area Wet Bulb Globe Temperature (WBGT) for field evolutions remote from the WBGT flag locations in enclosure (1), can be accomplished by accessing the installation's Automated Heat Stress System (AHSS) via the MCCS Liberty App utilizing a personal or official smart phone or by accessing the MCCS Okinawa public website at https://www.mccsokinawa.com/ahss/. If the evolution is not in the area of the AHSS, standalone systems can be issued by the Installation Safety Office. If standalone systems are in use, a log through the duration of evolutions must be maintained. Logs must be maintained through the end of the heat season. WBGT readings will be taken hourly during Green through Yellow Flag conditions. Upon reaching Red Flag condition, monitoring and recording WBGTs will be performed at least every 30 minutes until the evolution ends, or flag conditions are reduced back to Yellow or Green; notifying units within the area of responsibility of flag conditions per enclosure (2).

(c) Ensuring leaders know their personnel and cultivate relationships based on trust to ensure that individual personnel always report their heat stress injury risk factors and symptoms without fear of reprisal.

(d) Ensuring personnel with one or more personal risk factors discussed in heat injury prevention training are identified, evaluated, medically cleared, and educated on heat stress injury prevention strategies by a medical provider before physical exertion in heat. A supervisor and/or coworker will

monitor identified individuals for heat stress injury symptoms listed in enclosure (3) during all events or other outdoor activities within the designated annual period with highest risk of heat injury, or when temperatures may be expected to exceed 80 degrees Fahrenheit.

(e) Ensuring the guidance in the references and enclosures within this Order are applied using RM and control processes in both garrison and non-garrison field events. The below examples are minimal requirements. If more stringent requirements are available in existing policy, the most stringent will be adhered to.

Garrison Field Events
Examples: Physical Fitness Tests (PFTs)/Combat Fitness Tests (CFTs), Marine Corps Martial Arts Program (MCMAP), Water Survival Training/Swim Qualification, unit physical fitness events, and gas chambers happening aboard an installation outside of the range environment. Basic Requirements: -Pre-event Deliberate Risk Management Assessment -2 or more Heat Casualty-trained responders -Safety vehicle stocked with heat casualty/active-cooling field management supplies (per enclosure 3) -Verified means of contacting nearest supporting medical treatment facility capable of conducting aggressive active cooling -Verified means to activate Emergency Medical Services (EMS)
Non-Garrison Field Events
Examples: Events taking place on a range, live fire event, dismounted movements, and jungle training. Basic Requirements: -All basic requirements for Garrison Field Events -1 or more Heat Casualty Care-trained Hospital Corpsman with basic field medical care supplies

1. For Garrison field events, Hospital Corpsman are not required to be on site. For these events, commanders and leaders shall:

a. Ensure a Deliberate RM assessment is signed off at the appropriate level per reference (a), safety vehicle with dedicated driver is on site to transport casualties, and communication devices are available to summon emergency services and notify medical treatment facility of casualty transport.

b. Designate at minimum 2 Heat Casualty Responders from among line personnel not participating in the event and positioned where they are best able to access training participants. These responders shall be trained by a Heat Casualty Care-trained Hospital Corpsman to conduct non-medical field management of all potential heat casualties.

c. Establish reliable means of contacting nearest supporting Medical Treatment Facility (MTF) capable of conducting aggressive active cooling and reliable means of activating EMS.

d. Safety vehicle must be staged and have heat casualty/active-cooling field management in vehicle.

2. For Non-Garrison field events, the commander or leader shall:

a. Complete the above paragraphs a. and b. listed under Garrison field events.

b. Designate at least one Heat Casualty Care-trained safety Hospital Corpsman capable of providing heat casualty care in the field, including taking core (rectal) temperatures, and a designated

safety vehicle with a driver to monitor the event, implement prevention measures, respond to heat related emergencies, and transport heat casualties. The safety corpsman and driver will not actively participate in the evolution to which they are assigned to monitor.

c. Establish reliable communications (coordinated with Heat Casualty Care-trained safety Hospital Corpsman) with supporting MTF prior to commencing remote field events. Provide the supporting MTF with information regarding the event time, location, and heat stress injury risk assessment.

d. The MTF Senior Medical Department Representative (SMDR) must be notified of all events that may require clinical support. The MTF SMDR is the Senior Medical Officer (SMO) of the supporting Marine Center Medical Home (MCMH) within the local clinic, unless otherwise defined by local policy.

e. After hours support requests must be routed to the MTF SMDR at least 2 weeks prior to any event.

3. Equip the safety vehicle with supplies fulfilling the non-medical portion of the field management supply checklist in enclosure (3). These supplies are the responsibility of the unit controlling the event and can be purchased through GSA ServMart. Ice can be acquired by coordinating with the local dining facility. Medical supplies for evolutions must be requested by the respective unit's medical support and will not be provided by the MTF. The safety Hospital Corpsman will have basic first aid equipment to include rectal thermometer, blood pressure cuff, and Intravenous (IV) tubing and fluids. The safety Hospital Corpsman and cooler will go with the heat casualty transported by ambulance or safety vehicle for expedient cooling. If the event that requires Hospital Corpsman support only has the one Heat Casualty Care-trained Corpsman and/or one safety vehicle available, the event will be halted until their return, or until another equivalently trained Hospital Corpsman and/or vehicle are on site.

4. Obtaining WBGT information per enclosure (1) and via the MCCS Liberty App or by accessing the MCCS Okinawa public website at https://www.mccsokinawa.com/ahss/.

5. Regulating events, work/rest cycles, and fluid replacement per enclosures (2) and (4).

6. Applying the prevention guidance in enclosure (3) to all warm weather events.

7. Conditioning and acclimating all personnel, per enclosure (5) before participation in a PFT/CFT or other high-risk activities, per enclosure (3), will maintain conditioning year-round.

8. Reporting

a. Per reference (b), all heat and cold casualties will be reported by the member's chain of command via Risk Management Information–Streamlined Incident Reporting (RMI-SIR) system. Choose from the list below and use the installation's Reporting Unit Code (RUC) by location to ensure proper statistical analysis and tracking:

MCB Butler: Camps Courtney, Foster, Hansen, Kinser, Lester, [Gonsalves (Jungle Warfare Training Center, (JWTC)], and Ieshima Training Complex	67400
Marine Corps Air Station (MCAS) Iwakuni	02209
Combined Arms Training Center (CATC) Camp Fuji	20229
MCB Hawaii	02301
MCAS Kaneohe Bay	02303
MCAS Futenma	02601

Camp Mujuk	20810
Camp Blaz	67420

b. The member's first level command, via their supporting Medical Department, is responsible for ensuring submission of a Medical Event Report (MER) for all injuries IAW reference (d). For units assigned or attached to III MEF, MERs shall be submitted via the form in enclosure (7). This form will be sent via email within 48 hours of casualty occurrence to the respective Major Subordinate Command (MSC) Surgeon and III MEF Surgeon (IIIMEFPREVMED@usmc.mil), and to the supporting MTF per local policy.

9. Training

a. Ensuring personnel receive training in heat and cold injury prevention, recognition, response, and management on an annual basis. The training curriculum will be guided by their supporting Safety and Medical departments. For commands without organic or supporting Safety and/or Medical, guidance should be sought from III MEF Safety (IIIMEFSafety@usmc.mil)/MCIPAC Safety (MCBButlerBaseSafetyOfficeAdmin@usmc.mil) and MEF Health Services (iiimefprevmed@usmc.mil). Annual training will be conducted at least 2 weeks prior to the start of the annual period with highest risk of heat injury. Initial training for all personnel new to their respective region will be conducted prior to them standing duty or being involved or participating in any field events.

b. Provide cold injury prevention, identification, response, and field management education and training prior to the start of a mission or training in a cold weather environment.

b. Tasks

(1) Installation Commanders (MCB Hawaii, MCB Blaz, CATC Fuji, MCAS Iwakuni, and Camp Mujuk)

(a) Shall designate an annual period with highest risk of heat stress injury for their location based upon the local climate.

(b) Develop and promulgate heat and cold stress injury procedures for your respective areas of responsibility as applicable to this Order and the references to ensure notification procedures are identified to support units aboard your installations when conducting training evolutions.

(2) MCIPAC-MCBB Camp Commanders and MCAS Futenma Station Commander. Camp/Station Commanders on Okinawa, to include the OIC, Ie Shima Detachment and OIC, Jungle Warfare Training Center (JWTC) will:

(a) Ensure the Automated Heat Stress System (AHSS) for your respective location is functioning on the MCCS Okinawa public website at https://www.mccsokinawa.com/ahss/ while the heat index reading is in effect from 1 May to 31 October for Okinawa-based units. Commencing at 0700 daily, ensure hourly readings of the heat index are updated on the website until conditions meet or exceed RED FLAG. When at or above RED FLAG conditions, ensure the website is updated every thirty minutes until conditions return to YELLOW or GREEN FLAG. If the heat index is not updating/functioning as stated above, immediately contact the Installation Safety Office (ISO) at 645-3806 for immediate trouble shooting or replacement.

(b) Purchase Green, Yellow, Red, and Black Heat Condition Flags. Ensure the appropriate flag is flown from designated flagpole(s) at each camp/station area per enclosure (1) to indicate the effective WBGT heat index readings as noted in enclosure (2). Contact Base Property Control Office (BPCO) Customer Service at 645-3438, or on the Global address book at MCBBUTLER, BPCO CUSTOMERS, CUSTSERV.BPCO.MCBB.FCT@USMC.MIL for purchase information. Flags and flag replacement information are available at USMC Servmart. Flag Condition and colors are located in enclosure (2).

(c) Possess a backup system to the AHSS for measuring WBGT readings during heat stress season and maintain logs when the back-up system is in use. Logs shall be maintained for the duration of the present heat stress season. Backup systems are available as needed for check out at the ISO. The ISO heat stress coordinator will issue all back-up system prior to the commencement of the heat season. A backup system is defined as any system capable of providing the correct readings of Dry Bulb (DB) temperature, Wet Bulb (WB) temperature, Relative Humidity (RH), and Globe Temperature (GT). These values are used to determine the Wet Bulb Globe Temperature Index that is used to determine the correct flag conditions (DB, WB, RH, and GT = WBGT).

NOTE: The WBGT is computed as follows:
(DB x 0.1) + (GT x 0.2) + (WB x 0.7) = (WBGT)

(d) Provide a primary and alternate point of contact, with phone numbers, for AHSS administration to the MCIPAC-MCBB ISO.

(3) AC/S G-3, III MEF. Process feasibility of support requests received via Automated Message Handling System (AMHS) at address "III MEF, G-3" for commands that either do not have organic Hospital Corpsman within their Table of Organization, or for commands without sufficient Hospital Corpsman support for their scheduled event(s). Requests must be received by III MEF, G-3 six weeks prior to the event for support to be sourced.

(4) AC/S G-3, MCIPAC-MCBB. Ensure Range Control provides timely notification to training units in the field on Okinawa of WBGT readings. All units to the south of Ginoza Dam will receive the Camp Hansen reading and units north of the Ginoza Dam will receive the Camp Schwab reading.

(5) AC/S G-4, MCIPAC-MCBB. Maintain appropriate stock of Heat Flags at Base Property Control Office (BPCO) to support camps and the air station aboard Okinawa. Ensure a process is in place for Camp/Station Responsible Officers (RO) to survey Heat Flags that need to be replaced/surveyed. For Camps/Station to receive information on the flag replacement process, contact BPCO Customer Service at 645-3438 or on the Global address book at MCBBUTLER, BPCO CUSTOMERS, p

(6) AC/S G-6, MCIPAC-MCBB. Maintain a web link on the internet and SharePoint incorporating the WBGT as sourced from the AHSS MCCS Okinawa public site.

(7) AC/S, Marine Corps Community Services (MCCS)

(a) Maintain AHSS sites within MCCS identified Gyms aboard Okinawa Camps and Station.

(b) Ensure heat stress readings are displayed on both https://www.mccsokinawa.com/ahss/, and the MCCS Liberty App.

(c) Ensure access is available to heat stress logs of present heat season for heat stress injury mishap investigation and historical purposes.

(d) Ensure access to MCCS facilities where AHSS are housed for maintenance/trouble shooting.

(8) Installation Safety Office, MCIPAC-MCBB

(a) Ensure proper funding, operation, maintenance, calibration and communication of WBGT systems.

(b) Maintain AHSS equipment as organizational property. If the online AHSS is out of service/off-line, ensure each alternate device is signed for via hand receipt by the designated Camp/Station representative at the rank of E-6 or above, or civilian equivalent prior to use. Alternate systems will be issued prior to the commencement of the heat season. During the off-season months (1

November – 30 April) all AHSS equipment and alternate devices will be removed from active locations for storage by 30 November.

(c) Coordinate the maintenance, installation, and operation of WBGT equipment and AHSS sites to include retention of historical database for WBGT heat index (Okinawa) per enclosures (1) and (2).

(d) Ensure hand-held WBGT systems are available for checkout for field evolutions remote from the WBGT flag locations. Request of equipment can take place by calling the Camp Foster ISO at 645-3806.

(9) MCIPAC-MCBB Communication and Strategy. Provide information campaign support throughout the highest heat injury risk period to educate the Marine Corps community on the dangers associated with heat illness/injury, preventive measures, and first aid procedures.

(10) III MEF Surgeon's Office. Provide a medical expert to review this Order annually and provide recommended updates to the MCIPAC-MCBB Safety Director.

(a) Provide guidance on the content of training programs in Heat and Cold Stress Injury Prevention, Identification, Response, and Management for all MEF personnel.

(b) Provide guidance, oversight, and support for training programs on Heat and Cold Casualty Care for MEF Medical Providers and those leading to qualification as Heat and Cold Casualty Care-trained safety Hospital Corpsman for MEF Hospital Corpsmen

(c) Ensure Medical Providers receive initial training on Heat and Cold Casualty Care prior to supporting any field event and then annually thereafter.

(d) Ensure Hospital Corpsmen receive initial training leading to qualification as Heat and Cold Casualty Care-trained safety Hospital Corpsman prior to supporting any field event and then annually thereafter.

(e) Receive, compile, and analyze Reports of Heat/Cold Injury [enclosure (7)] and identify trends in heat and cold casualty incidence and make recommendations for programmatic changes.

(11) Senior Medical Officers (SMOs), Marine Centered Medical Homes (MCMHs), III MEF

(a) Provide and ensure completion of initial and annual refresher training on Heat and Cold Casualty Care by MEF Medical Providers assigned to or serving within their MCMH. Initial training must be completed prior to providers being on duty in the MCMH.

(b) Provide and ensure completion of initial and annual refresher training leading to qualification as Heat and Cold Casualty Care-trained safety Hospital Corpsman by Hospital Corpsmen assigned to or serving within their MCMH. Initial training must be completed prior to Corpsmen serving in the MCMH.

(c) Provide guidance on and ensure submission of Reports of Heat/Cold Injury by medical providers in their MCMH per paragraph 8.b on page 5 of this Order.

(12) Commanding Officers, OICs, and Civilian Equivalents

(a) Commands organically staffed with Hospital Corpsman will ensure unit Safety and Medical personnel provide Heat Stress Injury training each year to all personnel no later than 2 weeks prior to their heat season as defined by local/regional policy. Those personnel newly arriving to their respective region during heat season shall be provided training prior to standing duty or being involved in any field event.

(b) Commands not organically staffed with Hospital Corpsman shall request support as appropriate via the AMHS to AMHS address "III MEF, G-3" six weeks prior to events that require Hospital Corpsman support. If there is a specific command in mind to provide the support, add their AMHS address to the CC on the message release. Also, provide Heat Stress Injury training annually to all personnel no later than 2 weeks prior to the designated heat season.

(c) Ensure new personnel arriving in country are identified by wearing a white t-shirt during unit/group organized physical conditioning or training for the first six weeks after arrival. During field training exercises, Commanding Officers will establish a system to identify and monitor new arrivals and previous heat casualties, e.g., wearing a strip of white tape on Kevlar helmet or around pants leg.

(d) Ensure appropriate risk management assessments are conducted for both garrison and non-garrison based field events utilizing the Joint Risk Assessment Tool at https://jrat.safety.army.mil/, per reference (a).

(13) MEF Senior Medical Department Representatives (SMDRs)

(a) Understand the active cooling capabilities of supporting medical treatment facilities and EMS, and advise health services support plans for their respective command field events.

(b) Provide medical input for Risk Management Assessments to mitigate the occurrence of heat and cold casualties.

(14) Responders and Health Services staff that provide Field Care to Heat and Cold Casualties

(a) Complete the applicable initial training on Field Management and Casualty Care prior to supporting a field event and/or serving in clinic as applicable to their respective roles.

(b) Adhere to the respective field management guidelines in enclosures (3) and (6).

5. Administration and Logistics. Any deviations or requests for changes to this Order must be routed to the Director, ISO MCIPAC-MCBB.

6. Command and Signal

a. Command. This Order is applicable to members of the United States Armed Forces assigned to III MEF, MCIPAC-MCBB installation commands, and other tenants and activities operating on MCIPAC-MCBB installations.

b. Signal. This Order is effective the date signed.

S. E. LISZEWSKI

J. W. BIERMAN

DISTRIBUTION: III MEF List I, II
MCIPAC-MCBB List A

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HEAT FLAG LOCATIONS

Heat flag contact and location information are as follows:

CAMP/STATION	MONITORED BY	BLDG#	PHONE#	FLAG LOCATION
Foster	Camp Services	494	645-7315	Bldg 1 (MCB/WING HQ) Bldg 494 (H&S BN)
Kinser	Camp Services	107	637-1886	Bldg 107 (Camp HQ/Gate 1) Bldg 1307(Gym Area) Bldg 500 (Warehouse Road) Bldg 1217(Roberts Field) Bldg 864 (JSG HQ) Bldg 520 (PMO)
Hansen	Camp Operations	2860	623-4649	Bldg 2860 (Camp HQ) Bldg 2386(Clinic) Bldg 2466 (Ranges) Gate 1 Parade Deck Hansen Brig
Courtney	Camp Services	4231	622-7633	Bldg 4231 (Clinic) Bldg 4451 (Gym)
Schwab	Camp Services	3403	625-2215	Bldg 3510 (RAS) Bldg 1020 (Ammo)
MCAS Futenma	Station Weather	510	636-3177	Bldg 159 (Semper Fit Gym) Bldg 510 (Station Weather)
Gonsalves	IDC (Corpsman)	500	622-2211/2238	Bldg 500 (HQ/BEQ)
Ie Shima Training Facility (ISTF)	OIC	80	622-2600	Bldg 80 (ISTF HQ)
MCAS Iwakuni	Weather Officer	5780	253-3005	Bldg 1 (HQ) Bldg 1010 (Ironworks South) Bldg 9595 (Ironworks North) Bldg 3420 (Boathouse)
Fuji	Range Control	265	224-8051	Bldg 265 (CP)
Hawaii	METOC (MCAS) CDO (MCBH) CDO (CLB-3) SDO (MAG-24)	6823 216 1086 301	808-257-2839 808-257-7700 808-257-0047 808-590-6961	Bldg 6823 Bldg 216 Bldg 1086 Bldg 301
Mujuk	S-4	1201	315-763-6927	Front Gate (PMO)
MCB Camp Blaz	TBD	TBD	TBD	TBD

HEAT FLAG AND ACTIVITY LIMITATIONS

Essential activities may be conducted outside this guidance with the following considerations:
Essential activities are defined as those activities associated with scheduled exercises, or other major training evolutions where the disruption would cause undue burden on personnel or resources, be excessively expensive, or significantly reduce a unit's combat readiness.
Essential outdoor physical activity will be conducted at a level that is commensurate with work/rest cycles per enclosure (4) and in conjunction with the unit Commanding Officer coordinating with the Ground Safety Manager/Officer, Medical Officer and/or supporting Senior Medical Department Representative, which should be the Senior Medical Officer or Deputy Senior Medical Officer of the supporting Marine Center Medical Home at the supporting clinic when feasible.
All efforts should be made to reschedule these activities during cooler periods of the day.
Individual elective outdoor physical fitness training shall also observe the principals of risk mitigation per reference (a).

Flag Color*	WBGT Index (°F)	Intensity of Physical Exercise
Green 	80-84.9	Discretion required in planning heavy exercise for un-acclimated personnel. Ensure constant supervision of all such activities.
Yellow 	85-87.9	Strenuous exercise and activities (for example, close order drills or marching at a standard cadence) should be curtailed for new and un-acclimated personnel during the first three weeks of heat exposure. Avoid outdoor classes in the sun.
Red 	88-89.9	Strenuous exercise curtailed for all personnel with less than 12 weeks training in hot weather. All physical training should be halted for personnel who are not fully acclimatized. Personnel who are fully acclimatized may carry on limited activity not to exceed six hours per day. Personnel will not be burdened with body armor, field marching packs or similar equipment during red flag.
Black 	90 and Above	Physical training and strenuous exercise suspended for **ALL PERSONNEL** (excludes operational commitment not for training purposes). Halt all non-essential physical activity for all units. **Essential activities may proceed ONLY after appropriate risk management decision by the commander, and/or commanding officers per reference (a) is made.**

*Be vigilant: predominance of heat injuries occur during No flag or Green flag conditions.

HEAT CASUALTY CARE

1. FIELD MANAGEMENT OF CASUALTIES WITH ALTERED MENTAL STATUS

a. ***Decreasing a heat casualty's core body temperature in the shortest possible time is the goal of field management. The **goal core temperature** is **102°F**. Prolonged time with an elevated core temperature dramatically heightens the risk of permanent disability or death.***

b. Field management applies to all care delivered prior to handoff of patient care to Emergency Medical Services (EMS) or Military Treatment Facility (MTF) staff care. Below are the overarching steps that are to be conducted by designated non-medical and health services personnel for heat casualties with and without altered mental status, as well as a basic supply checklist. They are not comprehensive of all that may be needed or need to be done. Supporting medical departments may dictate additional steps or supplies. Steps may occur simultaneously or out of sequence per situational requirements.

c. Examples of altered mental status include unresponsiveness, diminished responsiveness, confusion, seizures, and/or dizziness that does not improve rapidly by stopping physical activity.

d. The below applies to all casualties that have a clear airway, are breathing on their own, and have uncompromised circulation. For casualties with a blocked airway, are not breathing, and/or have compromised circulation, prioritize Basic Life Support and Tactical Combat Casualty Care methods and activate EMS.

2. NON-MEDICAL PERSONNEL

a. Immediately halt event.

b. Initiate rapid transport of the casualty to the nearest facility capable of the most advanced method of active cooling (preferably cold-water immersion) that was identified prior to the event. If transport is not feasible, continue with subsequent steps while immediately activating EMS to come to the point of injury.

c. Remove as much clothing as possible (all except underwear) from the casualty to increase effectiveness of applied cooling methods.

d. Initiate and provide continuous active cooling with ice water-soaked sheets and towels and ice packs. Sheets are wrapped around the torso, towels are placed on the head, and ice packs are placed on neck, in armpits, and on groin.

e. Continue active cooling by changing the sheets, towels, and packs every 60 seconds. Immediately resubmerge used sheets and packs in the ice slurry-filled cooler in preparation for the next change cycle.

3. HEALTH SERVICES PERSONNEL *(Below steps are in addition to actions a. through e. above)*

a. Obtain core (rectal) temperature and other vital signs.

b. Evaluate Airway, Breathing, and Circulation and intervene as indicated and capable.

c. Establish intravenous access with large bore IV (18 gauge or larger), and bolus with up to 1 liter of cold normal saline or other appropriate resuscitation fluid.

d. Initiate active cooling with the most aggressive means possible (cold water immersion, "taco", "burrito", or other verified method).

e. Assess oxygenation status and start supplemental oxygen if below 95%.

f. Monitor core temperature continuously. If unable to continuously monitor, assess core temperature based upon the expected time to reach 102°F or every 5 -10 minutes based upon initial level of core temperature elevation. Record complete vital signs every 5 minutes.

g. Continue aggressive cooling until core temp is 102°F, then stop active cooling measures.

4. **DISPOSITION**

a. ** In general, patients **should not** be transported to the hospital until core temperature is verified to have reached 102°F, unless aggressive cooling measures are available at the hospital and the same or higher level of cooling cannot be accomplished more expeditiously by transport to a nearer location (for example, a branch clinic) or at the point of injury. Decisions for earlier transport should be made by or in consultation with the senior physician engaged in care or on site, or a remotely available physician (for example, Hospital Emergency Department physician) if the former is unavailable.

b. Call and activate EMS to come to the location that aggressive active cooling is being conducted. This should be done as soon as possible after identification of these casualties. It is to preferably be done by personnel not providing direct care or supervision of care for the casualty.

c. Call the local Emergency Department and speak with an Emergency Department physician regarding the status and impending transport of a heat casualty to the hospital.

d. Provide informed in-person patient handoff to EMS or medical treatment facility personnel.

e. Complete all necessary case-related debriefs, documentation, and reporting.

5. **FIELD MANAGEMENT OF HEAT CASUALTIES WITH NORMAL MENTAL STATUS**

a. These casualties may experience one or more of muscle cramps, lightheadedness, overwhelming fatigue, nausea and/or vomiting.

(1) Move casualty to shaded area.

(2) Encourage oral rehydration with cool fluids, preferably ones that can replenish electrolytes.

(3) If casualty does not begin and continue to improve after 5 minutes of rest, expeditiously transport them to the nearest medical treatment facility.

6. **FIELD MANAGEMENT BASIC SUPPLY CHECKLIST**

a. **Non-Medical supplies**

(1) Cooler filled with water and ice slurry (reconstitute periodically to maintain slurry consistency)

(2) Sheets (4)

(3) Military Poncho (1)

(4) Towels (2)

(5) Ice packs (8)

b. **Medical Supplies**

(1) Rectal thermometer

(2) IV access supplies (access site sterilization supplies, 18-gauge needles, tubing)

(3) 1-liter normal saline (stored in ice water filled cooler)

WORK / REST RATIOS AND FLUID REPLACEMENT GUIDE

Flag Condition	WBGT °F	Easy Work		Moderate Work		Strenuous Work	
		Work/ Rest	Water per Hr.	Work/ Rest	Water per Hr.	Work/ Rest	Water per Hr.
Green	80-84.9	No Limit	½ Qt.	50/10	¾ Qt.	30/30	1 Qt.
Yellow	85-87.9	No Limit	¾ Qt.	40/20	¾ Qt.	30/30	1 Qt.
Red	88-89.9	No Limit	¾ Qt.	30/30	¾ Qt.	20/40	1 Qt.
Black	90 and Greater	50/10	1 Qt.	20/40	1 Qt.	10/50	1 Qt.

Note 1: Add 10°F to the Wet Bulb Globe Temperature (WBGT) index for Mission Oriented Protective Posture (MOPP) gear performing Easy Work and add 20°F to the WBGT index for Moderate and Hard Work.

Note 2: Add 10°F to the WBGT index PPE, or when body armor is worn. Minimize restrictive clothing/equipment and wear light colored clothing if possible.

Note 3: Work/rest times and fluid replacement volumes will sustain performance and hydration for at least four hours of work in the specified heat category. Individual rehydration fluid needs will vary.
** CAUTION: Hourly fluid intake should not exceed 1 ½ quarts per hour.
** Daily fluid intake should not exceed 12 quarts.
** If fluid intake begins to approach these maximal levels, supplement water intake with a non-caffeinated electrolyte sports drink and ensure snacks/meals are consumed.

Note 4: It is important to eat snacks/meals for salt and calories.

Note 5: DON'T OVERDO IT! Beware of the accumulative effects of heat and exertion from previous days. Personnel who feel sick, dizzy, or fatigued must stop exerting. Adjust work/rest ratios based on continuous unit assessment and self/buddy aid evaluations.

Note 6: Actively cool during rest periods by soaking hands and arms in water (colder better), via showers, shade, fans, or any other means of cooling. At a minimum, drop loads and relax dress.

Examples of **(Military Specific Tasks)** Easy, Moderate, and Strenuous Work

Easy Work	Moderate Work	Strenuous Work
-Weapon maintenance -Walking hard surface at 2.5 mph, <30 lb. load -Marksmanship training -Drill and ceremony	-Walking loose sand at 2.5 mph, no load -Walking hard surface at 3.5 mph, <40-pound load -Calisthenics -Patrolling -Individual movement techniques (low crawl, high crawl, etc.) -Defensive position construction -Field assaults	-Walking hard surface at 3.5 mph, ≥40 lb. load -Walking loose sand at 2.5 mph with load -Running and participating in physical conditioning training

Examples of **(Commercial Type Tasks)** Easy, Moderate, and Strenuous Work

Easy Work	Moderate Work	Strenuous Work
-Operating equipment -Inspection work -Walking on flat, level ground -Using light hand tools (wrench, pliers, etc.). However, this may be moderate work depending on the task -Travel by conveyance	-Pneumatic drilling or like activity -Installing ground support -Loading cargo -Carrying equipment/supplies weighing 20–40 pounds -Using hand tools (shovel, fin-hoe, scaling bar) for short periods	-Climbing -Carrying equipment/supplies weighing 40 pounds or more •Installing utilities •Using hand tools (shovel, fin-hoe, scaling bar) for extended periods

PHYSICAL CONDITIONING AND ACCLIMATIZATION

1. Adapting one's physical condition (acclimatization) to a new environment with increased heat and humidity is critical to preventing heat stress injuries. Acclimatization is required when changing between different geographical regions and upon climate changes within the same area as occurs during the change of seasons. Acclimatizing makes heat injury less likely but does not fully prevent it.

a. Individuals not exercising or working in heat for 2 or more weeks should be reconditioned/reacclimatized during a graduated 3 to 6 week program adapted from Table 1 or Table 2. For deconditioned/non-acclimatized personnel, start at 50% of the last conditioned level and increase exertion 10% per week.

b. Table 1 suggested 6-week program. Weeks 1-4 improve aerobic fitness. Weeks 5-6 raise core temperature to assist acclimating. Break a sweat but don't push beyond comfort in heat. Rest when needed. Use various exercise modalities to rest muscle groups (walk, jog, bike, etc.). Allow for continuously available fluids to quench thirst and replenish electrolytes.

Table 1. CONDITIONING AND ACCLIMATIZING IN GARRISON OR PREDEPLOYMENT

Week	Activity	Intensity (%HRmax)*	Frequency (times per week)	Duration (min)
1	Intermittent exercise	65% - 80%	3	35 - 40
2			4	45 – 55
3			4	60 – 70
4			5	80 - 90
5	Continuous aerobic activity	55% - 65%	5	100
6			7	

*Maximum Heart Rate, HRmax=220-age. Example 65%HRmax calculation for a 25 year old Marine = 0.65(220-25)=127 beats per minute.

2. Table 2 suggests an alternate 21-day program that may also augment the program in Table 1 for deployments as an 8-day arrival in-theater program. Again, allow for continuously available fluids to quench thirst and replenish electrolytes.

Table 2. ACCLIMATIZATION IN GARRISON / UPON ARRIVAL IN THEATER*

Day	Dress	Duration (min)	Activity (moderate workload**)
1	No Activity. Rest, Rehydrate, and Sleep. (for 24 hrs post-flight)		
2	T-shirt and shorts	50	Walk 3.5 mph
3		100 (50 x 2)	Walk 3.5 mph. Rest 15 min. Resume walking.
4		100	Walk 3.5 mph
5	Utility uniform	100 (50 x 2)	Walk 3.5 mph. Remove blouse and rest 15 min. Resume walking
6		100	Walk 3.5 mph
7	Utility uniform plus 22 lbs. load	100 (50 x 2)	Walk 3.5 mph. Remove blouse and load. Rest 15 min. Resume walking.

8-21	Utility uniform and 22 lbs. load. (add load up to 39 lbs as tolerated days 14+)	100	Walk 3.5 mph

*Applicable to WBGT 79-86
** The moderate workload may be adjusted at one's own pace or mission needs but must avoid exhaustion.

COLD CASUALTY CARE

1. ***Gradual but rapid and continuous warming of cold-induced injuries is the means of initial treatment. Wet heat (warm water bath) is preferred to dry heat (warming pads). Re-warming of frozen tissue (frostbite) should be done only after the casualty can be kept warm after thawing of the injury and there is not risk of re-freezing, which will lead to greater damage. Permanent damage and death are directly related to how much time the body or body part spends at the cold temperature.***

2. Cold Weather and Cold-Induced injuries include Snow Blindness, Trench/Immersion Foot, Frostbite, Carbon Monoxide Poisoning, Chilblains, and Hypothermia. The first of these injuries, snow blindness, is due to overexposure of the eyes to direct and reflected UV rays of sunlight that may occur in snowy environments. Carbon Monoxide (CO) Poisoning is due to the inhalation of this gas from improper ventilation of heat sources (engines, stoves, and other fume-emitting heaters). The others are the result of exposure of the body or parts of the body to cold temperatures.

3. Field management applies to all care delivered prior to handoff of patient care to Emergency Medical Services (EMS) or Medical Treatment Facility (MTF) staff care. Below are the overarching steps that are to be conducted for cold casualties by designated non-medical and health services personnel. It is not comprehensive of all that may need to be done. Supporting Medical departments may dictate additional steps. Always rehydrate and feed casualties. Do not allow intake or use of alcohol-containing or tobacco / nicotine-containing products, which increases risk of permanent damage,

4. The below applies to all casualties that have a clear airway, are breathing on their own, and have uncompromised circulation. For casualties with a blocked airway, are not breathing, and/or have compromised circulation, prioritize Basic Life Support and Tactical Combat Casualty Care methods.

a. Snow Blindness: Blindfold both eyes and apply a clean, cool wet compress over the blindfold. If further exposure is unavoidable, use dark glasses or bandages with tiny pinholes to decrease further exposure and damage while allowing the injured patient to function.

b. Chilblains: Apply local warming (putting bare hands over an affected area of the face; putting affected hands inside the uniform under the armpits; putting bare feet against the abdomen of another). Avoid rubbing or massaging the affected area.

c. CO Poisoning: Move suspected casualty to a fresh air area. If not breathing, perform CPR. After reviving, immediately transport.

d. Trench/Immersion Foot: Remove wet clothing; replace with dry, warm clothes and slowly warm the casualty at room temperature. The affected area may become swollen, red, and hot to the touch after it has been re-warmed. Avoid walking on injured feet as blisters may form. Do not break any blisters.

e. Hypothermia: Whole body re-warming of the casualty.

REPORT OF HEAT / COLD INJURY

FROM: (Reporting Activity)_____ DATE_____

TO: [USNHO - PREVENTIVE MEDICINE]

NAME

SSN

GRADE | RATE | RACE | SEX | AGE

BIRTHPLACE

DATE AND TIME OF EXAMINATION

UNIT TO WHICH ATTACHED

DATE REPORTED TO PRESENT STATION

PRESENT ILLNESS (Onset Date and Time) | WBGT

DIAGNOSIS (Check one)
- ☐ HEAT CRAMPS
- ☐ HEAT EXHAUSTION
- ☐ HEAT STROKE
- ☐ CHILBLAIN
- ☐ FROSTBITE
- ☐ HYPOTHERMIA

TIME ON ACTIVE DUTY (Months)

DESCRIBE BRIEFLY WHAT PATIENT WAS DOING AT TIME OF INJURY INCLUDE DESCRIPTION OF CLOTHING

NOTE:
(1) ALL HEAT STRESS INJURIES SHOULD HAVE RECTAL TEMPERATURES.
(2) ALL HEAT STRESS INJURIES WITH RECTAL TEMPERATURES GREATER THAN 104° SHOULD HAVE SERUM SGOT DRAWN 24 HOURS AFTER THE INJURY.

LAB FINDINGS

SYMPTOMS (Check all applicable)
- ☐ UNCONSCIOUS
- ☐ DIZZY
- ☐ CONFUSED
- ☐ NUMBNESS
- ☐ VISUAL DISTURBANCES (Specify)
- ☐ WEAK
- ☐ NAUSEA
- ☐ CRAMPS
- ☐ VOMITING
- ☐ OTHER (Specify)

SKIN (Check all applicable)
- ☐ RED
- ☐ PALE
- ☐ WET
- ☐ DRY
- ☐ RASH
- ☐ NORMAL
- ☐ OTHER (Specify)

TEMP(R) | RESP.

PULSE

HEIGHT

WEIGHT

HOURS OF SLEEP (Last 24 Hours)

LAST MEAL (Date and time)

AMOUNT ☐ LIGHT ☐ MODERATE ☐ HEAVY

BLOOD PRESSURE

SYSTOLIC_____DIASTOLIC_____

AMOUNT OF WATER IN QTS. (Last 12 Hours)

SWEATING (Check one)
☐ EXCESS ☐ MODERATE ☐ NONE ☐ SLIGHT

LAST HISTORY OF HEAT/COLD ILLNESS (Specify type)

DATE (MONTH AND DAY) DIAGNOSIS NONE

RECENT ILLNESS OR IMMUNIZATION

DATE DIAGNOSIS NONE

DISPOSITION-PRESENT ILLNESS

☐ CLINIC ☐ HOSPITAL (Admitted)

☐ SICK LIST/SIQ (NUMBER OF DAYS)_____

☐ LIGHT DUTY (NUMBER OF DAYS)_____

REMARKS(Initial treatment, long-term treatment potential, extent of injury, remission)

SIGNATURE

PREPARED: SUBMITTED: COMMANDING OFFICER

NAVMED 6500/1 (Rev. 9-92) S/N 0105-LF-019-0800