



SAFETY TIPS 2023 HEAT RELATED ILLNESS



The summer season encompasses the hottest months of the year and subsequently has the most heat-related injuries and illnesses. Some heat-related illness can be fatal if treatment is not provided quickly. We must learn to recognize and treat heat-related illness to prevent our fellow Marines, Sailors, and family or friends from suffering from their effects. Early detection of heat-related illness is key. The following safety tips are offered to help recognize, prevent and treat heat-related illness:

HEAT RELATED ILLNESSES: Refer to chart for most common symptoms and treatments:

Heat Stroke: The most severe and dangerous of the heat related illnesses. Heat Stroke involves extreme core body temperatures (in excess of 103 degrees). It can cause death or permanent disability if emergency treatment is not provided immediately.

Heat Exhaustion: The next most severe heat related illness. Heat Exhaustion is the body's response to an excessive loss of water and salt, usually through excessive sweating.

Heat Cramps: Heat cramps usually affect those who sweat a lot during strenuous exercise or activities. Sweating depletes the body's salt and moisture levels. Low salt levels in muscles causes heat cramps.

Sunburn: Extended skin exposure to the sun causes painful sunburns. Use sunscreen with Broad Spectrum or UVA/UVB to prevent sunburns. Re-apply sunscreen often to all exposed body parts. Sunburns prevent the body's ability to cool down.

Heat Rash: Heat rash is a skin irritation caused by excessive sweating during hot, humid weather.

Heat Injury Prevention Tips to consider during hot summer months:

- Ensure adequate sleep, hydration, and nutrition prior to training.
- Avoid excessive hydration. Consume 1 quart/hour under most training conditions or a maximum of 1.5 quarts/hour under very strenuous conditions
- Recognize early signs and symptoms of heat illness in yourself and fellow Marines
- Rehydrate slowly and steadily after training; replenish salts and nutrients via food intake and avoid supplements
- Monitor and record Wet Bulb Globe Temperature (WBGT)
 - Wear of Body Armor: Add 5°F to WBGT index
- Adhere to work/rest cycle in high heat; wear sunscreen and find shade to rest in
- Do not allow Marines to empty canteens to lighten load and enforce battle buddy checks
- Wear and use bonnie caps and sunglasses if possible

| HEAT-RELATED ILLNESSES | |
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| WHAT TO LOOK FOR | WHAT TO DO |
| HEAT STROKE | |
| <ul style="list-style-type: none"> • High body temperature (103°F or higher) • Hot, red, dry, or damp skin • Fast, strong pulse • Headache • Dizziness • Nausea • Confusion • Losing consciousness (passing out) | <ul style="list-style-type: none"> • Call 911 right away-heat stroke is a medical emergency • Move the person to a cooler place • Help lower the person's temperature with cool cloths or a cool bath • Do not give the person anything to drink |
| HEAT EXHAUSTION | |
| <ul style="list-style-type: none"> • Heavy sweating • Cold, pale, and clammy skin • Fast, weak pulse • Nausea or vomiting • Muscle cramps • Tiredness or weakness • Dizziness • Headache • Fainting (passing out) | <ul style="list-style-type: none"> • Move to a cool place • Loosen your clothes • Put cool, wet cloths on your body or take a cool bath • Sip water <p>Get medical help right away if:</p> <ul style="list-style-type: none"> • You are throwing up • Your symptoms get worse • Your symptoms last longer than 1 hour |
| HEAT CRAMPS | |
| <ul style="list-style-type: none"> • Heavy sweating during intense exercise • Muscle pain or spasms | <ul style="list-style-type: none"> • Stop physical activity and move to a cool place • Drink water or a sports drink • Wait for cramps to go away before you do any more physical activity <p>Get medical help right away if:</p> <ul style="list-style-type: none"> • Cramps last longer than 1 hour • You're on a low-sodium diet • You have heart problems |
| SUNBURN | |
| <ul style="list-style-type: none"> • Painful, red, and warm skin • Blisters on the skin | <ul style="list-style-type: none"> • Stay out of the sun until your sunburn heals • Put cool cloths on sunburned areas or take a cool bath • Put moisturizing lotion on sunburned areas • Do not break blisters |
| HEAT RASH | |
| <ul style="list-style-type: none"> • Red clusters of small blisters that look like pimples on the skin (usually on the neck, chest, groin, or in elbow creases) | <ul style="list-style-type: none"> • Stay in a cool, dry place • Keep the rash dry • Use powder (like baby powder) to soothe the rash |



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HEAT ACCLIMITIZATION: Although illness from exposure to heat is preventable, every year thousands become sick from heat exposure and some cases are fatal. Most outdoor fatalities (50-70%) occur in the first few days of working in warm or hot environments because the body needs to build up a tolerance to the heat gradually over time. Lack of acclimatization represents a major risk factor for fatal outcomes. Monitor weather and know when the hottest time of day occur.

HEAT-RELATED ILLNESSES AND FIRST AID: Become familiar with heat symptoms. When any of these symptoms are present, promptly provide first aid. Do not try to diagnose which illness is occurring. Diagnosis is often difficult because symptoms of multiple heat-related illnesses can occur together.

- Time is of the essence. When in-doubt call emergency services or 911.
- Cool the person immediately. Use active cooling techniques (fan a towel, shirt, blanket, etc.).
- If moveable, take the affected person to a cooler area (e.g., shade or air conditioning space).
- Loosen or remove outer layers of clothing, especially heavy protective clothing.
- Place ice or cold wet towels on the head, neck, trunk, armpits, and groin.
- Never leave a person with heat-related illness alone. The illness can rapidly become worse.

HEAT RELATED MISHAPS: The following MARFORCOM heat related illnesses occurred the last few years:

- LCpl, rode bicycle to the beach to conduct PT. Sustained heat exhaustion and severe sun burn.
- PFC, became a heat casualty while returning from a field exercise. Body temp rose to **104.6**.
- LCpl, working in hangar and began cramping and felt pain in chest. Suffered from heat stroke.
- Cpl, conducting field exercise, sustained a **109** body temperature. Rushed to hospital for treatment.
- LCpl, conducting 3-mile run, lost consciousness. Sustained heat stroke with body temp rising to **107**.
- PFC, hiking with a 75-pound load, fell out with a core temperature of **107.5**. PFC experienced hallucinations and was unable to walk straight; determined to be severely dehydrated.



CARRY IDENTIFICATION: Marines and Sailors are reminded to carry some form of identification (ID card, dog tags, unit) while conducting PT. Recent mishaps have occurred with Marines while conducting PT, both on and off base, and they have encountered treatment delays. To alleviate potential delays, ensure your unit and/or emergency contact are readily available on your person, and display any medical, allergy, or medicine alerts. Let someone know where you are going to conduct PT and your estimated return time.

RISK MANAGEMENT (RM): Every Marine is responsible for breaking the chain of events that leads to a heat related mishap. Incorporate 'In-Depth' or 'Deliberate' RM planning into all summer events. Exercise discipline in avoiding needless risks and their consequences. Use the 'Battle Buddy' system when engaging in outdoor activities. Hydrate, rest, make smart decisions and continue to watch out for one another.

RESOURCES:

- [II MEF Policy Letter 5-23- II MEF Force Training and Heat-Related Injury Mitigation Directive](https://www.cdc.gov/disasters/extremeheat/warning.html)
- <https://www.cdc.gov/niosh/topics/heatstress/acclima.html>
- <https://www.cdc.gov/niosh/topics/outdoor/>
- <https://www.cdc.gov/niosh/mining/UserFiles/works/pdfs/2017-128.pdf>

Manage the Risk



Protect the Force