Heat Stress / Heat Safety

Recommendations and Suggestions for Safety

Whether on patrol or performing other duties, such as VSCs, PA missions or assisting at CG units, Auxiliarists often work in environments that expose them to heat stress. Some Auxiliarists may have physical conditions that make them more susceptible to heat stress (e.g. age, medications, physical conditioning) than others. Reducing the risk of heat stress is an important consideration when planning Auxiliary missions and activities.

The following suggestions, recommendations, and best practices should help mission leaders and crews evaluate the potential for heat stress during their pre-mission planning, so they can select mitigating tactics to reduce risk.

WHEN SHOULD HEAT STRESS BE CONSIDERED?

When the Heat Index per the National Weather Service indicates a temperature of 60° F (15.5° C) or above, the coxswain, pilot or land mission lead and crew should review heat stress potential as part of their risk management process and discussion. The environmental section of the PEACE model should prompt consideration of heat stress potential.

WHAT IS THE HEAT INDEX AND WHERE DO I FIND IT?

The heat index is a measure of how hot it feels when relative humidity is considered along with the actual air temperature.

The OSHA/NIOSH Heat Safety Tool App is a useful resource for planning outdoor work activities based on how hot it feels throughout the day. It has a real-time heat index and hourly forecasts specific to your location. This app (available for both Apple and Android platforms) is the source for the 60 degree index temperature recommendation, noting at that temperature, there may be some risk of heat-related illness if tasks involve use of Personal Protective Equipment (PPE) and/or extreme physical exertion.

For more information on the OSHA/NIOSH Heat Safety Tool App, click this link: https://www.cdc.gov/niosh/topics/heatstress/heatapp.html

EVALUATION

When first planning the mission, the NOAA/NWS Heat Index Forecast 3-7 Days Out can be helpful to make a preliminary evaluation of potential heat problems.

WPC Heat Index Forecasts (Days 3-7) (noaa.gov)

Before and during the mission the OSHA/NIOSH Heat Safety Tool app can be helpful to determine:

- Specific heat index for the current time and location
- Hourly location-specific predicted heat index
- Signs and symptoms of heat illnesses
- First aid and emergency response procedures for heat illnesses
- Risk factors for heat illness

ADMINISTRATIVE CONTROLS

The following should be reviewed with the crew prior to the mission as appropriate:

- Causes of heat-related illnesses.
- The signs and symptoms of heat-related illnesses.
- Other risk factors affecting tolerance to heat stress: e.g. exertion, clothing, personal protective equipment, drugs, alcohol, medical conditions.
- Prevention measures (e.g. acclimatization, hydration, shade, limit activities/time in heat, increase number of crew, crew rotation, rest breaks, buddy system)
- The importance of immediately reporting any symptoms or signs of heat-related illness in themselves or in crew to the coxswain or lead.
- Procedures for responding to signs/symptoms of heat-related illness (e.g., first aid, abort mission, notify OPCON, call 911 determine meeting place for EMS depending on severity).

HYDRATION

- Water should be potable, <15°C (59°F), and readily accessible.
- Sufficient fluid replacement should be available for the duration of the mission.
- For moderate activities in the heat that last less than 2 hours, drink 1 cup (8 oz.) of water every 15–20 minutes.
- Generally, fluid intake should not exceed 6 cups per hour.
- If sweating lasts for several hours, utilize sports drinks containing balanced electrolytes, NOT “energy drinks”.
- Provide individual drinking cups for each crew member.
- Avoid alcohol and avoid drinks with high caffeine or sugar, such as “energy drinks” or sodas.

DURING MISSION

Crew leads should:

- Monitor current and predicted weather reports from the National Weather Service.
- Re-evaluate risk, using the GAR tool, as mission conditions change.
- Monitor and encourage adequate fluid intake and rest breaks to cool down and hydrate.
- Encourage rest and water breaks when a member feels heated.
- Modify work/rest periods to give members a chance to get rid of excess heat.
- Assign new and unacclimatized crew lighter work and longer, more frequent rest periods.
- Adjust mission start time and/or duration to minimize exposure to heat.
- Adjust mission location to include access to spot cooling (e.g., air conditioning) or shade.
- Modify uniform of the day – AWU instead of ODU, Hot Weather Uniforms, remove ODU blouse in appropriate situations.
- Tilly hat instead of ball cap.