

Heat Stress Injury Prevention

Q. When is heat stress a concern?

A. Any time a hot environment and exertion combine to threaten the body's ability to cool itself.

- Not just in summer, especially shipboard and indoors!
- Temperatures of 75° (24° C) or even lower (especially with protective equipment) may be involved.

Q. What are the major risk factors for heat stress injury?

A. Anything that increases heat exposure or decreases cooling

- Hot weather, hot work spaces, hot equipment
- Exercise, hard (strenuous) work, long work hours
- High humidity, stagnant air (no breeze)
- Not drinking enough water
- Protective equipment (coveralls, body armor, respirators)
- Fever, infections, illness, drugs, alcohol
- Previous heat injury, previous day heat stress

Q. What are effective ways to prevent heat stress from causing injury?

A. Monitoring conditions and cooling as needed (“Watch, Water, Work-rest”)

- When heat stress conditions are expected, WBGT Index is measured regularly (this is not the “heat index”)
- Flag conditions (white, green, yellow, red, black) determine exertion (work-rest cycles) outdoors
- PHEL curves (I-VI) determine work-rest cycles shipboard
- Drinking enough water to keep up with sweating (up to one liter or more per hour)
- When a shipmate or co-worker shows signs of heat strain, take immediate action to cool him or her

Q. What are effective cooling measures and when should you use them?

A. Cooling should be done IMMEDIATELY, with anything available, and as much as needed!

- For mild overheating: cool water drinks, resting in the shade or air conditioning
- For signs of heat injury (increased body temperature, exhaustion): the above plus removing clothing, pouring water over the victim's body, fans, air conditioning, helicopter downdrafts, etc.
- For more serious heat injury (confusion, decreased sweating, loss of consciousness): add ice water immersion and immediate transport to medical care. Do not force fluids if decreased consciousness!

Q. What are more resources for more guidance on heat stress injury prevention and treatment?

A. The Navy and Marine Corps Public Health Center technical manual, Prevention and Treatment of Heat and Cold Stress Injuries, NEHC-TM-OEM 6260.6A, and the Manual of Naval Preventive Medicine, NAVMED P-5010-3, Prevention of Heat and Cold Stress Injuries.

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