


East Lake Tarpon Special Fire Control District		
	<i>SOP 302 Physical and Environmental Training Prerequisites</i>	
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	Forms or Attachments: None	

TRAINING AND HEAT STRESS

It is the position of East Lake Tarpon Special Fire Control District to place the health and safety of all employees as our highest priority. A search of various resources indicates the most important measure to ensure firefighter safety is education, ensuring that personnel are aware of the precautions to take, the warning signs and treatment of heat emergencies. Due to the nature of emergency services, we are unable to cease all activities during times of high heat. Furthermore, with Florida’s climate, we often experience heat indices that are considered to be extreme; however, certain precautions can be taken during emergency and non-emergency operations to reduce the risks to employees.

Heat Index is considered one of the best means of evaluating environmental heat conditions. Heat index is determined from a formula utilizing the ambient air temperature and the relative humidity or dew point. The following practices are to be implemented whenever temperatures are expected to exceed 100 degrees or whenever the combination of air temperature and humidity equal or exceed a heat index of 100.

- All non-emergency outdoor activities will be evaluated for their necessity, or ability to be moved indoors.
- When possible, outdoor activities will occur prior to 1000hrs or after 1600hrs.
- When possible, shade, cooling fans and/or misting devices will be employed.
- All personnel will be closely monitored for proper hydration and rest periods.

If an Excessive Heat Warning has been issued by the National Weather Service (NWS), all non-emergent outside activities will be cancelled or postponed. Excessive heat warnings are issued if the daytime heat index is greater than or equal to 105. If outdoor activity will be performed wearing bunker gear, 10 points must be added to the heat index. If the activity is in direct sunlight, add an additional 10 points. Example:

Heat Index = 80, bunker gear +10, direct sunlight +10 = 100.

Employees who are overweight, dieting, or past heat casualties are more prone to heat injuries. As a result, their activities must be closely monitored.

Common Sense Approach To Battle The Heat:

- **Acclimatization.** It takes up to two weeks to become acclimatized. Therefore, it is important for personnel to spend some active time outside each day to ensure that the body is adjusted to the current temperature.
- **Fluid intake.** Employees should drink adequate fluids before and during any outdoor operations or training exercise.
- **Physical conditioning.** Infections, fever, recent illness, overweight, fatigue, drugs (cold medication), and previous heat injuries may increase the risk of heat stress.
- **Work schedules.** If the situation allows, heavy work and activities that require strenuous physical exertion should be scheduled for early morning or late evening. Provide shade, fans, and/or misters to cool the working atmosphere, and avoid working in the direct sun, whenever possible.
- **Clothing.** If the operation or training exercise requires the use of protective clothing, loosening or removing of protective clothing elements should occur as soon/often as possible.
- **Heat Index.** **Heat index is** the best means of evaluating environmental heat. Officers must monitor the heat index and, if tactically possible, modify activities and monitor employees accordingly. The purpose of this procedure is to establish guidelines and responsibilities for minimizing the effects of heat stress to department members.

Member's Responsibilities:

Each member will be responsible to:

- maintain proper rest/nutrition regimen
- observe appropriate work/rest cycles
- hydrate before, during, and after each shift (minimize coffee, tea, and cola products)
- inform supervisor of any ill effects to heat

Company Officers Responsibilities:

Company officers shall be responsible to monitor/manage:

- Cardiovascular activity (running, etc.). Shall be limited to a maximum of 30 minutes.
- A minimum of 64 ounces (2 quarts) of fluid should be consumed during the 24 hour shift.
- Work/rest cycles--request a relief company and assignment to rehab prior to crew consuming two bottles of air.
- Company activity and request additional resources as necessary.

Command Responsibilities:

- Establish a Rehab Sector on all working fires.
- Assign companies to Rehab Sector as needed or requested (companies shall remain in rehab for a minimum of 20 minutes).
- Utilize the practice of first company in, first company out routine.
- Request additional resources as necessary.

TRAINING SAFETY:

All training activities will occur with heat indices being taken into account. When the heat index is between 90 and 120, heat stress precautions will be put into place. When a high heat warning is issued by the NWS, all training will be postponed until the heat index lowers. If outdoor activity will be performed wearing bunker gear, 10 points must be added to the heat index. If the activity is in direct sunlight, add an additional 10 points. Example:

Heat Index = 80, bunker gear +10, direct sunlight +10 = 100.

Employees who are overweight, dieting, or past heat casualties are more prone to heat injuries. As a result, their activities must be closely monitored.

Remember to be alert to early signs of dehydration and heat illness. They forewarn of more severe casualties to come without intervention. Virtually all heat injuries are preventable.

Guidelines for Heat Exposure Limits

Always monitor signs and symptoms of heat stress. Discontinue any activity for any person when:

- Sustained heart rate is greater than 160 BPM for those under 35, and 140 for those over 35.
- There are complaints of sudden and severe fatigue, nausea, dizziness, lightheadedness, or fainting.
- There are periods of inexplicable irritability, malaise or flu-like symptoms.
- Sweating stops and the skin becomes hot and dry.

PHYSICAL PREREQUISITES:

Employees participating in strenuous training or training in structural firefighting gear shall have their vital signs taken prior to and after the training exercise. In order for the employee to participate in the training, their vitals must be:

Blood pressure less than 160/100

Heart rate less than 110

If an employee's vital signs exceed either of these parameters, allow the employee to rest for several minutes, and retake the vitals. If they still exceed the parameters, the employee will be removed from duty until he or she is evaluated by a physician and determined to be fit for duty based on NFPA 1582.

ENVIRONMENTAL PREREQUISITES:

If an Excessive Heat Warning has been issued by the National Weather Service (NWS), all non-emergent outside activities will be cancelled or postponed. Excessive heat warnings are issued if the daytime heat index is greater than or equal to 105. If outdoor activity will be performed wearing bunker gear, 10 points must be added to the heat index. If the activity is in direct sunlight, add an additional 10 points. Example:

Heat Index = 85, bunker gear +10, direct sunlight +10 = 105.

The department Wet Bulb Globe thermometer or the weather station at St Petersburg/Clearwater Airport may be used to determine current conditions.

http://www.met.utah.edu/cgi-bin/droman/meso_table_mesowest.cgi?stn=KMCF&unit=0&time=GMT