

# Southwest Area

## Heat Related Illness Health and Safety Alert

**Discussion:** With the continuing heat and single digit humidity in effect across much of the Southwest Area, numerous cases of heat related illness have been reported. There is a concern that personnel are not taking the needed mitigations despite the unusual weather that is taking place.

**Concern to Firefighters & employees:**

Heat-induced illness is a result of the body's inability to cope with heat. This condition can manifest itself as a minor symptom or a life-threatening emergency needing immediate attention. While recognition and treatment are important, prevention is the key. **HEAT RELATED ILLNESS IS PREVENTABLE!**

Becoming acclimated to working in a hot and dry environment takes time, especially for those out-of-area support personnel. Even if a person is physically fit, it takes four to eight days to adapt to these conditions. Fatigue and/or alcohol consumption can delay the acclimation process and may put a person at risk for a heat illness if an intense activity is conducted following either of these conditions. Individuals not acclimated or physically fit can suffer a heat-induced illness at lower levels of heat and work activity.

**Areas of Concern:**

**Dehydration:** Stay well hydrated! Energy drinks (such as **Red Bull, Monster, and RockStar, etc.**) should not be used while exercising as the combination of fluid loss from sweating and the diuretic quality of the caffeine can leave the user severely dehydrated. About one third of consumed liquid during a work shift should be a sports drink such as Gatorade, for replenishing fluids, electrolytes and carbohydrates.

**Rhabdomyolysis:** Physical activity with exertion may cause Rhabdomyolysis (Rhabdo) in the firefighting population. Such events often occur under extremely hot or humid conditions and are related to physical exertion.. Factors that increase the risk of Rhabdo and associated renal failure include dehydration, use of nutritional supplements, drug use, and possible sickle cell traits. The management of Rhabdo primarily consists of correction of fluid and electrolyte anomalies and knowledge of the symptoms. Rhabdo can be life-threatening and immediate medical attention is needed.

**Acute Compartment Syndrome:** Swelling, and/or bleeding within the muscle compartment creating pressure on capillaries and nerves. Can be caused due to over-exertion and other heat related issues

**Mitigation Measures:**

Water is the primary form of fluid replacement. Firefighters should be reminded to hydrate before, during and after strenuous work activities, despite the weather conditions. Before engaging in work activities, drink 20 ounces of cool water or an adequate sports drink. During the operational period, take frequent rest breaks and drink 8 ounces of water every 15 minutes. (1 Qt. /hour) If cold water is available it is preferred.

Monitor hydration by observing urine color; pale yellow is normal and dark yellow is a sign of dehydration. Be aware of unusual body odor especially when it smells like 'ammonia' – this could be a sign of Rhabdomyolysis.

Be able to recognize the symptoms of heat illness in yourself and others. **If you feel overexerted – STOP!** Hydrate and try to lower your heart rate and cool your body immediately. Oftentimes, feeling thirsty means that you could be dehydrated. If you or someone else exhibit symptoms, notify co-workers or supervisor immediately. Time is of the essence in a heat related illness emergency! **Regardless of the job performed, heat-induced illness prevention is a concern. Seek immediate attention if heat illness occurs and conduct rapid medivac if needed... ignoring or delaying the need for medical attention could lead to permanent disability and even death!**