

Pacific Northwest Geographic Area

Safety Alert – Heat Related Illness

7/28/17 - As of July 17, there have been 10 HRI incidents reported on fires within the Pacific Northwest. The severity of these situations has varied from shading up and cooling off, to firefighters being airlifted due to the seriousness of their HRI. With the frequency of HRI within the region this season, the PNWCG would like to increase awareness and provide some resources to protect you while working in the heat.

What you need to know: Heat related illnesses are a direct result of the body's inability to cope with heat. When heat gain is greater than heat loss, firefighters are at risk of suffering HRI. These illnesses can manifest themselves as a minor symptom or a life threatening emergency. HRIs include; Heat rash, heat exhaustion, and heat stroke. While recognition and treatment are important, prevention is key. It is important to note that at temperatures above 95° F with any amount of humidity will put you in a high risk zone. Increased hydration and frequent breaks are required for any physical activity performed in this zone.

Consuming water or sports drinks does not guarantee that you won't suffer a heat related illness! Over a 22-year period, the military reported that only 17 percent of all soldiers suffering HRI were dehydrated (Tech Tips June 2010). Therefore, just employing hydration strategies in extreme heat will not prevent HRI.

In order to help mitigate the increased risks, consider utilizing one or more of the following strategies that was recommended by Pike IHC in 2011.

- **Adopt a bi-modal operational shift:** This entails a morning briefing and fireline operations, followed by afternoon monitoring and heat recovery, and then evening fireline operations. This shift would allow resources to operate during the more mild temperatures of the mornings and evenings, and take advantage of reduced fire activity during those same hours.
- **Continue with current operational shifts, providing more frequent breaks:** Daily schedules and operational timing stay the same, yet utilize the flexibility to adjust work/rest ratios as the weather changes. An example from the Pike IHC during summer 2011:
 - 98-103° F – 10 minutes rest after 1 hour of continuous work
 - 103-105° F – 15 minutes rest after 45 minutes of continuous work
 - >105° F – 30 minutes rest after 30 minutes of continuous work

Other Preventative Strategies

- While resting, resources should seek shade, when vehicles are close by, provide breaks in vehicles with AC.
- Hydrate with **COLD** water and sports drinks if at all possible.
- Remember to consume fluids before and after operational shifts as well.
- Provide sleeping locations that allow for adequate rest.
- Use the buddy system and watch for signs and symptoms of HRI.
- Be flexible with the work, environment and firefighters.

As temperatures climb and more frequent and longer breaks are taken, production rates can decrease. This is acceptable given the increased risk of HRI in these conditions.

Resources

OSHA Heat Safety Tool – https://www.osha.gov/SLTC/heatillness/heat_index/heat_app.html

HRI Reporting form – <https://gacc.nifc.gov/sacc/resources/safety/heatillnessreportingform.pdf>

Heat Illness Basics for firefighters – <http://eastforkfire.org/Divisions/Safety/Alerts/Heat-Illness-Basics.pdf>