

Miller, Diane M. (CDC/NIOSH/EID)

From: Chris Coombs [C2i@metrocast.net]
Sent: Monday, October 05, 2009 12:56 PM
To: NIOSH Docket Office (CDC)
Subject: FireFighter and Hostile Environment Heat Stress Mitigation

Dear Friends,

Please accept the following comment on Docket 192, PPT for the upcoming annual Stakeholders Meeting next Spring:

Problem: HEAT STRESS KILLS: Firefighters, first responders and other Hostile Environment Workers are dying and suffering serious health issues due to the heat stress their bodies experience in doing their jobs, primarily because the environment requires a great deal of thermal insulation, is hot, or requires a fairly tight seal to prevent intrusion of hostile substances from reaching the human physiology, thereby trapping body heat instead of shedding it.

Factoid #1: The hostility of the conditions exceeds the capacity of current equipment to deal with the harm effectively. The gear required is not capable of shedding body core temperature build-up sufficient to allow the body's natural heat-shedding capacity to keep the core at tolerable temperatures.

Factoid #2: The current "solution" recognized by the authorities having jurisdiction over the heat stress issue is to focus on physical conditioning and hydration to mitigate the damage or potential for harm. **THIS HAS PROVEN TO BE A FALSE solution.** Two primary factors diminish the effectiveness of this "solution": a) the body cannot keep up with the load presented by the environment and the insulative properties of the PPE, and b) the very nature of the challenges prevent the release of heat-laden moisture (SWEAT) from the interior of the PPE, because of the hostility of the environment.

Solution: The Fire Service, First Responder Community, and literally millions of workers who suffer from heat prostration and long-term challenge to health from frequent and oppressive heat build-up require a solution that will **ACTIVELY** remove heat from the PPE interior, at any outside temperature challenge the PPE is capable of handling, to the ultimate effect that the wearer's body core temperature is kept at safe levels.

Our company will be demonstrating such a technology at the NIOSH gathering in FL next month.

We have a simple, low-cost, low profile product that will allow the wearer to maintain proper body core temperature, mitigating if not actually eliminating the threat of overheating and it's double threat to life safety, organ damage and loss of cognitive function and awareness.

We would appreciate the opportunity to present a paper on this topic at the Annual Meeting.

Thanks for your consideration.

Sincerely,

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