

Risk Factors for Heat-Related Illness in U.S. Workers

An OSHA Case Series

Tustin, Aaron W. MD, MPH; Cannon, Dawn L. MD, MS; Arbury, Sheila B. RN, MPH; Thomas, Richard J. MD, MPH; Hodgson, Michael J. MD, MPH

Author Information

Office of Occupational Medicine and Nursing, Directorate of Technical Support and Emergency Management, Occupational Safety and Health Administration, Washington, District of Columbia.

Address correspondence to: Aaron W. Tustin, MD, MPH, Office of Occupational Medicine and Nursing, Department of Labor – OSHA, 200 Constitution Ave NW, Mailstop N3653, Washington, DC 20210 (tustin.aaron.w@dol.gov).

The views expressed in this article are the personal views of the authors and do not purport to reflect official views of OSHA or the U.S. Department of Labor.

No outside funding was obtained for this work.

The authors have no conflicts of interest.

Supplemental digital contents are available for this article. Direct URL citation appears in the printed text and is provided in the HTML and PDF versions of this article on the journal's Web site (www.joem.org).

Journal of Occupational and Environmental Medicine: August 2018 - Volume 60 - Issue 8 - p e383-e389

doi: 10.1097/JOM.0000000000001365

- Buy
- SDC

Metrics

Abstract

Objective:

The aim of this study was to describe risk factors for heat-related illness (HRI) in U.S. workers.

Methods:

We reviewed a subset of HRI enforcement investigations conducted by the Occupational Safety and Health Administration (OSHA) from 2011 through 2016. We assessed characteristics of the workers, employers, and events. We stratified cases by severity to assess whether risk factors were more prevalent in fatal HRIs.

Results:

We analyzed 38 investigations involving 66 HRIs. Many workers had predisposing medical conditions or used predisposing medications. Comorbidities were more prevalent in workers who died. Most (73%) fatal HRIs occurred during the first week on the job. Common clinical findings in heat stroke cases included multiorgan failure, muscle

breakdown, and systemic inflammation.

Conclusion:

Severe HRI is more likely when personal susceptibilities coexist with work-related and environmental risk factors. Almost all HRIs occur when employers do not adhere to preventive guidelines.

Copyright © 2018 by the American College of Occupational and Environmental Medicine

[^Back to Top](#)



Never Miss an Issue

Get new journal Tables of Contents sent right to your email inbox

Browse Journal Content

- Most Popular
- For Authors
- About the Journal
- Past Issues
- Current Issue
- Register on the website
- Subscribe
- Get eTOC Alerts

For Journal Authors

- Submit an article
- How to publish with us

Customer Service

Live Chat

- Activate your journal subscription
- Activate Journal Subscription
- Browse the help center
- Help
- Contact us at:
 - EMAIL:
customerservice@lww.com
 - TEL: (USA):