
Thomas E. Bernard

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Professor, College of Public Health

Professor since 8/1995; Associate Professor from 4/1989 to 8/1995
Chair, Department of Environmental and Occupational Health (11/2003 to 8/2017)

Education

Ph.D. in Occupational Health, University of Pittsburgh, Pittsburgh, PA (1975)
M.S. / B.S. in Mechanical Engineering, Carnegie Mellon University, Pittsburgh, PA (1972 / 70)

Major Professional Activities

Heat Stress. Recently, exploration of risk associated with heat stress exposures, occupational exposure limits, and physiological metrics to assess degree of exposure. Long history of investigations on the effects of protective clothing on the level of heat stress; and on the benefits of personal cooling systems. Applications of alternative methods of heat stress evaluation in work environments based on heat balance analysis techniques and on assessment of physiological strain. Implementation of integrated programs of heat stress management.

Ergonomics. Development, validation and refinement of ergonomics surveillance tool for MSDs. Implementation of job analysis tools to better match the needs of the users from personnel on the floor to engineers designing new jobs. Articulation of methods to predict the metabolic demands of work.

Instruction and Advising. Graduate-level courses in industrial ergonomics, physical agents and controls in industrial hygiene, and occupational health and safety management systems. Supervise student research. Routinely instruct in professional development courses.

Recognition

Fulbright Scholar at Loughborough University, UK (Fall 2011)
W. W. Clyde Chair, College of Engineering, University of Utah (Fall 2002)
Certified in Public Health (CPH) (5567, 8/2010)
Certified Safety Professional (CSP) (20170, 5/2008)
Certified Industrial Hygienist (CIH) (6346, 7/1994)
Certified Professional Ergonomist (CPE) (088, 6/1993)
Registered Professional Engineer (Pennsylvania PE-029166-E, 3/1980)
Fellow of American Industrial Hygiene Association (FAIHA™)
Member, ACGIH®
ACGIH® Physical Agents Committee (Consultant 1/2020 to present, Member 5/1999 – 12/2019, Vice Chair 2003-05, Chair 2006-08)
Board of Directors, *Journal of Occupational and Environmental Hygiene* (2009 – 2010)
NIOSH Peer Review Panels (SOH and SBIR: 2000 – 2006; SOH and SEP: ad hoc to present)
USF Health Leadership Institute (2008)
USF President's Award for Faculty Excellence (2003)
USF College of Public Health Outstanding Teacher Award (1993, 1996, 2003)
Westinghouse Signature Award of Excellence (1985 and 1987)
3 patents and 1 patent disclosure

Previous Employment

Westinghouse Electric Corporation, Research and Development Center (1978 - 1989)

United States Bureau of Mines, Pittsburgh Research Center (1976 - 1978)

Pennsylvania State University (1974-1975)

University of Pittsburgh (1971-1974)

Publications

Ashley, C. D., R Lopez, X. Garzón-Villalba, T. E. Bernard. Thermal exposure limit for mine refuge alternatives: A descriptive study. *Mining, Metallurgy & Exploration*, 37:179-186, 2020.

Garzón-Villalba, X. P., C. D. Ashley and T. E. Bernard. Benchmarking Heat Index as an occupational exposure limit for heat stress. *Journal of Occupational and Environmental Hygiene* 16(8):557-563, 2019 <<doi: 10.1080/15459624.2019.1628348 and PMID: 31233385>>.

Bernard T. E., D. S. Yantek and E. D. Thimons. Estimation of metabolic heat input for refuge alternative thermal testing and simulation. *Mining Engineering*, 70(8): 50-54, 2018.

Garzón-Villalba, X. P., Y. Wu, C. D. Ashley and T. E. Bernard. Heat stress risk profiles for three non-woven coveralls. *Journal of Occupational and Environmental Hygiene* 15(1): 80-85, 2018.

Bernard T. E., C. D. Ashley, X. P. Garzón, J.-H. Kim, A. Coca. Prediction of WBGT-based clothing adjustment values from evaporative resistance. *Industrial Health* 55(6):549-554, 2017.

Garzón-Villalba, X. P., Y. Wu, C. D. Ashley and T. E. Bernard. Ability to discriminate between sustainable and unsustainable heat stress exposures. Part 1: WBGT exposure limits. *Annals of Work Exposures and Health* 61(6):611-620, 2017.

Garzón-Villalba, X. P., Y. Wu, C. D. Ashley and T. E. Bernard. Ability to discriminate between sustainable and unsustainable heat stress exposures. Part 2: Physiological indicators. *Annals of Work Exposures and Health* 61(6):621-632, 2017.

Chang C. H., T. E. Bernard, and J. Logan. Effects of heat stress on risk perceptions and risk taking. *Applied Ergonomics* 62:150-157, 2017.

Garzon-Villalba, X. P., A. Mbah, S. W. Schwartz, Y. Wu, M. Hiles, H. Moore and T. E. Bernard. Exertional heat illness and acute injury related to ambient wet bulb globe temperature. *American Journal of Industrial Medicine* 59:1169-1176, 2016.

Ashley, C. D., J. Ferron, T. E. Bernard. Loss of heat acclimation and time to re-establish acclimation. *Journal of Occupational and Environmental Hygiene* 12:302-308, 2015.

Bernard, T. E., I. Iheanacho. Heat index and adjusted temperature as surrogates for wet bulb globe temperature to screen for occupational heat stress. *Journal of Occupational and Environmental Hygiene* 12:323-333, 2015.

Fletcher, O. M., R. Guerrina, C. D. Ashley, T. E. Bernard. Heat stress evaluation of two-layer chemical demilitarization ensembles with a full face negative pressure respirator. *Industrial Health* 52:304-312, 2014.

Deal, G. A., T. E. Bernard. Maximum acceptable effort for connector assembly in automotive manufacturing. *International Journal of Industrial Ergonomics* 44:207-213, 2014

Bernard, T. E., C. A. Barrow. Empirical approach to outdoor WBGT from meteorological data and performance of two different instrument designs. *Industrial Health* 51:79-85, 2013

List of Published Work in MyBibliography:

<http://www.ncbi.nlm.nih.gov/sites/myncbi/thomas.bernard.1/bibliography/47140041/public/?sort=date&direction=descending>

Book Chapters

Bernard, T. E. Thermal Stress. In Plog, B (ed), *Fundamentals in Industrial Hygiene*, 6th ed. Chicago: National Safety Council, 2012.

Bernard, T. E. Occupational Heat Stress. In Bhattacharya, A. and J. McGlothlin (eds), *Occupational Ergonomics*, 2nd ed. Boca Raton, FL: Taylor & Francis, 2012.

Larrañaga, M. D. and T. E. Bernard. Heat Stress. In V. E. Rose and B. Cohrssen (ed), *Patty's Industrial Hygiene and Toxicology*, 6th ed., Vol. 3, New York: John Wiley and Sons, 2011.

Editorials/Letters/Other Publications

Bernard, T. E. Oral and written testimony before the Committee on Education and Labor at the Subcommittee on Workforce Protections hearing entitled "*From the Fields to the Factories: Preventing Workplace Injury and Death from Excessive Heat*" 11 July 2019

Bernard, T. E. Occupational Heat Stress In USA: Whither We Go? (Editorial). *Industrial Health* 52, 1–4, 2014

Kjellstrom T., S-I Sawada, T. E. Bernard, K. Parsons, H. Rintamaki, I. Holmér. Climate change and occupational heat problems (Editorial). *Industrial Health* 51:1-2, 2013