



**Issue 45 (April 2016)**

**SPOTLIGHT**

**WSH Institute Forum on “Connecting WSH Research and Practice”**

5th May 2016 | 2pm - 5.30pm | Suntec Singapore Convention & Exhibition Centre



The WSH Institute has brought together experts and practitioners from various disciplines to share on key research outcomes and good practices to engender a safer and healthier work environment at the annual WSH Institute Forum in the afternoon of 5 May 2016.

For programme details and registration, click [here](#).

**Singapore WSH Conference 2016: Call for Posters (Last Call)**

**WHAT'S TRENDING**

**This Drone Automatically Sniffs Out Climate-Warming Gas Leaks**



(Source: Fast Co-Exist)

Physical Sciences (PSI), from Andover, Massachusetts, is developing a drone that uses an infrared laser beam. In standby mode, it sits on a charging platform monitoring the wellhead area. When it measures an excess of methane along the beam path, it automatically rises into the air and runs a search pattern of the area. If it finds a possible leak, it reports that information back.

[More...](#)

**Relevance: Can these drones be adapted to detect gas leaks from pipes in complex structures?**

**Watch Six Tiny Robots Pull an Entire Car**



(Source: Inverse)

Scientists at Stanford University's Biomimetics and Dexterous Manipulation Laboratory have been working on ways to increase the collective strength of small robots, which they call microTugs. MicroTugs are modeled in some ways after ants, whose incredible proportional strength and cooperation let them move objects many times their size. The end result is both freakishly strong and kind of cute.



[More...](#)

**Relevance: Can these robots help reduce risks in moving heavy equipment in space-constraint environments?**

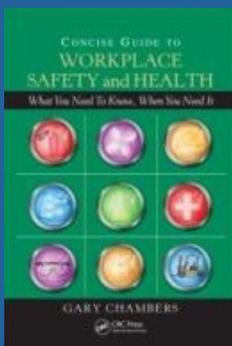
This year, the Singapore WSH Conference themed “**Total WSH: The Future of Our Workplace**” will highlight the importance of adopting a holistic approach towards managing both safety and health risks in the workplace. The poster session will provide a platform for delegates to share their research findings with WSH practitioners and policy makers. Interested participants are invited to submit an abstract of their poster using [this form](#) by **15th April 2016**. For more information, click [here](#).

## World Day for Safety and Health at Work



The WSH Institute has partnered with the International Labour Organisation to observe World Day on Safety and Health at Work on 28th April 2016, capitalising on strengths of tripartism and social dialogue. This year’s theme, “**Workplace Stress: A Collective Challenge,**” will help draw attention to current global trends on work-related stress and its impact. For more information, click [here](#).

## RECOMMENDED READING FROM THE WSH INSTITUTE COLLECTION\*



**TITLE:**

Concise Guide to Workplace Safety and Health: What You Need to Know, When You Need It

**AUTHOR:**

Gary Chambers

**AREA OF INTEREST:**

Asbestos, Bloodborne pathogens, Combustible dust, Compressed gases, Confined spaces, Cranes



Please use your QR code scanner to access the recommended reading titles on [Heat Stress](#)

Click [here](#) to access WSH Institute's e-books collection.

\* The WSH Institute Collection is a compilation of WSH-related resources accessible to the public through our collaboration with the National Library Board (NLB).

## OWL HIGHLIGHTS

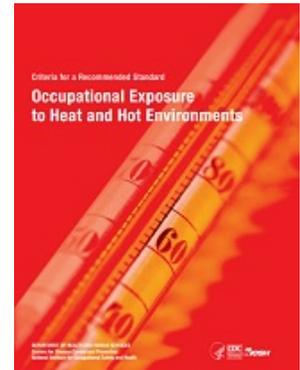
### Occupational exposure to heat and hot

# 1 environments

**Date of publication:** February 2016

**Source:** National Institute for Occupational Safety and Health

Workers who are exposed to extreme heat or work in hot environments may be at risk of heat stress, resulting in reduced productivity, occupational illnesses, injuries, and even death. This report details the fundamentals of heat stress and includes findings from recent studies which indicate new risk factors associated with a worker's risk of heat-related illness. It also recommends that employers need to establish a medical monitoring programme to prevent adverse outcomes and for early identification of signs that may be related to heat-related illness. The paper also emphasizes the importance of WSH training that both supervisors and workers should partake in before starting work in a hot environment and describes the various ways to accomplish it. As the lack of acclimatisation is a major factor associated with heat-related illness and death, the study urges employers to have an acclimatisation plan for both new and returning workers. Finally, the paper highlights 2 areas that warrant further research: climate changes, and the effect of heat exposure on the absorption of chemicals into the body.



To read more, click [here](#)

## 2 Principles of good work design: A work health and safety handbook



**Date of publication:** 2015

**Source:** Safe Work Australia

This handbook looks at how businesses can address hazards before a worker gets injured, and how tangible savings can be achieved by avoiding the costs associated with incidents that result from poor work design practices. It presents 10 general principles of good work design applicable to any workplace, business or industry, which are structured into the 3 sections below:

- (i) Why good work design is important
- (ii) What should be considered in good work design, and
- (iii) How good work is designed

Good work design optimises work health and safety, human performance, job satisfaction and business success, with consideration of workers' abilities and vulnerabilities.

To read more, click [here](#)



A final survey of the 29-item measure was administered to a sample of 1,835 employed respondents in British Columbia and Ontario. The results suggested that the measure is reliable and structurally valid. Additionally, this new measure can be used to compare vulnerability across different groups of workers or examine changes in the 4 dimensions over time.

To read more, click [here](#)

## Other Useful Resources

- Investigation report: West Fertilizer Company fire and explosion (*U.S. Chemical Safety and Hazard Investigation Board*)
- Asthma in furniture and wood processing workers: A systematic review (*Occupational Medicine Advance Access*)
- Return to work after knee replacement: A qualitative study of patient experiences (*BMJ Open*)
- Emerging infectious diseases from the workplace perspective (*Asian-Pacific Newsletter on Occupational Health and Safety*)

*OWLlinks is brought to you by Workplace Safety and Health Institute, Singapore. OWLlinks enables leaders and professionals to keep abreast of the latest WSH development and trends from around the world.*

For enquiries or feedback, please email us at [contact@wshi.gov.sg](mailto:contact@wshi.gov.sg)  
Visit the *WSH Institute website* for updates on WSH-related matters, information and events.

**Vision:** A leading Institute for WSH knowledge and innovations.  
**Mission:** Enhancing WSH through knowledge, innovations and solutions.

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The Observatory for WSH Landscape (OWL) is a function of Workplace Safety and Health Institute. OWL aims to observe, analyse and communicate changes in the workforce, workplace and working life to researchers, policy makers and industries in Singapore and Asia.