

## What's Trending

### Immersive virtual worlds: Multi-sensory virtual environments for health and safety training

While virtual reality (VR) is not uncommon in occupational safety and health (OSH) training, researchers found that adding heat and smell elements to the conventional VR system prompted participants to a greater sense of urgency in response to an emergency scenario. Compared to lecture-based training, participants trained in a virtual setting also displayed higher levels of engagement and an improved attitude to OSH training. Although test scores were higher for the former group immediately after training, trainees using VR had higher scores when the test was conducted a week later, suggesting better knowledge retention with VR training.



(Source: Institution of Occupational Safety and Health, Nov 2019)

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Relevance: A multi-sensory virtual environment can prepare users for common emergencies by providing them with realistic experiences. To enable greater adoption, cost effectiveness and system customisation would be important considerations to guide future development.

## OWL Highlights

## Intercultural encounters: Issues and intervention strategies involving immigrant workers with an occupational injury



This report suggests that occupational health and safety (OHS) practitioners develop intercultural competencies to promote successful return to work (RTW) for migrant workers who were injured at work. When seeking help, migrant workers were often hampered by the language barrier and a limited understanding of the administrative/ medical system. OHS practitioners need to understand this, as well as the workers' pre-injury work conditions and cultural perceptions so that appropriate strategies can be implemented for RTW. Doing this would also help to cultivate trust with the worker, which would then facilitate a smoother rehabilitation process.

Developing this competency is a long process that involves increasing personal awareness, acquiring cultural knowledge, demonstrating interpersonal skills and adopting an open-minded attitude.



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**Theme:** Workplace Culture  
**Date of Publication:** Oct 2019  
**Source:** Institut de recherche Robert-Sauvé en santé et en sécurité du travail

## The impact of using exoskeletons on occupational safety and health

Exoskeletons are wearable devices that enhance or support users' strength. They can be used as solutions to alleviate work-related musculoskeletal disorders (WRMSDs) arising from work tasks involving significant amount of manual handling.

This article provided a balanced analysis on the adoption of exoskeletons. While acknowledging its benefits, it also highlighted the potential risk factors associated with such devices. For example, some exoskeletons alleviate the stress to the torso and upper extremities by redistributing the load. However,



this forces other body regions to take on additional pressure and in turn, incur potential health risks. In the event of a malfunction, exoskeletons can also lead to injuries. In closing, the authors recommended for ergonomic designs to be improved in the workplace before considering the use of exoskeletons to reduce WRMSDs.



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**Theme:** Technology

**Date of Publication:** Nov 2019

**Source:** European Agency for Safety and Health at Work

## Crane cameras serve as “extra eyes”

Quoting a study from the Journal of Construction Engineering and Management, the article suggested that crane operators work under stress, especially during long shifts in difficult conditions. Crane cameras alleviate this by allowing the operator to confirm communications on the ground by providing a visual perspective. Serving as “extra eyes”, crane cameras enhance the situational awareness of the operators, thereby improving productivity and operation safety.

Crane cameras enable crane operators to see the riggers on the ground and the area around the load. This is important especially during blind-lift operations. When the operator has a better view, this will help him to verify if the load is properly attached to the hook block and will increase the accuracy of the placements and improve communication with other workers on the ground.



[Read More](#)

**Theme:** Technology

**Date of Publication:** 2017

**Source:** American Cranes & Transport

## Useful Resources

- [Using Total Worker Health® concepts to address hearing health](#)  
(National Institute for Occupational Safety and Health, Sep 2019)
- [EAST for health & safety: Applying behavioural insights to make workplaces safer](#) (The Behavioural Insights Team, 2019)
- [Third European Survey of Enterprises on New and Emerging Risks \(ESENER 3\)](#) (European Agency for Safety and Health at Work, Nov 2019)
- [The effects of workplace rest breaks on health problems related to long working hours and shift work among male apartment janitors in Korea](#)  
(Safety and Health at Work, Nov 2019)
- [Exploring on-site safety knowledge transfer in the construction industry](#)  
(Sustainability, Nov 2019)

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