

Total Worker Health in Action!

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Managers' Buzz

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While summertime often evokes images of leisure, Total Worker Health Team (TWH) Members have been busy navigating a programmatic evolution and preparing for a new fiscal year of activities. Top on the to-do list is to continue to build the scientific foundation for the TWH approach. We've got a number of efforts in progress.



First, we look forward with great anticipation to the impending release of the new Funding Opportunity Announcement (FOA) for the NIOSH Centers of Excellence for Total Worker Health. Release of this FOA will provide a fresh opportunity to again find the most promising researchers who are advancing the science of TWH. Second, after several years of groundwork, preparations are finally underway for a 2-day National

Institutes of Health Pathways to Prevention workshop, which will evaluate the current scientific knowledge on integrated approaches and plot the direction for future research. The meeting, scheduled for December 9-10, will be open to the public. Third, we have been reviewing and discussing all of the valuable stakeholder input we received last autumn on the proposed draft National Total Worker Health Agenda. This helpful input has already led to an expansion of our Issues Relevant to Total Worker Health list to better reflect the [changing nature of work in the 21st century and the changing needs of today's workforce](#). Compensation and benefits, organization of work, and workplace violence prevention, are examples of issues that have always been of interest and now have become even more pressing.

TOTAL WORKER HEALTH™

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We are also excited to report that on June 24 we convened our Fifth Annual National Expert Colloquium on TWH with unprecedented representation by our labor partners. This Colloquium provided a most valuable opportunity to listen and receive input from those who are closest to workers. We heard firsthand what they view as the most important challenges facing today's workers and we are in the process of considering options to be more responsive.

In this issue we are excited to bring you a [TWH Exclusive](#) commentary on sedentary work by dr. mc schraefel. Six new Affiliates have joined us, read more in [News from Partners](#). Plus, we are excited to tell you about two separate trainings for nurses: one on job stress, the other on shift work and fatigue. And wait, there's more: five new peer-reviewed publications by our NIOSH-funded Centers of Excellence!

This is an exciting time to be engaged with Total Worker Health—we are constantly seeking to advance TWH research and practice based on the best scientific evidence, all while staying committed to being responsive to you, our stakeholders and partners. As always, we welcome you to reach out to us at twh@cdc.gov. We thrive on your input and suggestions. As always, we wish you and your loved ones an abundance of health and well-being—in the fullness of your life—on and off the job.

As always, we hope this newsletter inspires you to become a Total Worker Health advocate. Share your comments and stories about *TWH® in Action!* with us on Twitter ([@NIOSH_TWH](#)), on the [NIOSH Total Worker Health® LinkedIn Group](#), or by email at twh@cdc.gov.

TOTAL WORKER HEALTH[®] Exclusive

Is it Time to Burn the Chair?

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Apple CEO Tim Cook recently made a big splash by saying that “a lot of doctors believe sitting is the new cancer.” Mr. Cook was not specific in citing sources for his statement, but presumably he was referring to studies that have found increased health risks from sedentary behavior that are analogous to cancer in prevalence and cost. For instance, in 2011, Dunstan et al.¹ called the cardiovascular effects of sedentarism and its related risks ‘the new smoking.’

So yes, sedentarism is harmful. Indeed, most of us spend time using our bodies solely to move our brains from one chair to another. We move from a car or train to work; from a chair at work to a restaurant or movie theater; and from there to home, where we hang around watching sports, playing a video game, or working online. We sit a lot—on average, 10 largely uninterrupted hours a day. Although I'm personally in favor of burning the chair² in favor of movement (which can inspire us to be more creative), we don't have to be that extreme. Recent work on physiology strongly suggests that we

simply need to get more standing throughout our days than sitting to reset our systems. Moving frequently in fact is more effective than sitting all day, then going to the gym to work out for an hour, and then sitting again in the evening. An analogy can be made to chain smoking. If you stop smoking for just an hour, it will not mitigate the cumulative effects of the 7 hours before and the 7 after. We need to move throughout our day, including while we are at work.

Once we decide to reduce sitting at work, how do we make it happen? How do we support more movement during the work day? Apple CEO Tim Cook's suggestion is the Apple watch; it will detect when you've not been moving and vibrate or ring to shake you into awareness. Move where, though? For how long and to do what? The market is flooded with wearable technology that claims to promote health. Technology alone is not the answer. It can be used in conjunction with an environment that facilitates movement. We need an active movement culture in the workplace, utilizing sit-stand desks and walks to the printer.

There's NOT an App for It

It's not hard to understand why individual technology on its own is not going to solve a systemic problem like sedentarism. In a recent pilot study with Ogilvy Labs of Ogilvy Maher, UK, my colleagues and I looked at prompts to encourage standing with a group of participants interested in how they could improve their creativity—without trying to improve it. More movement is part of that process. Feedback we received is that these wonderfully keen people were still concerned about bothering office-mates by getting up from their desk and starting to do squats or lunges. Similarly, they were concerned about going away from their desks, lest they be perceived as slacking off or missing in action. Likewise, at meetings where there are small groups and only chairs, they reported it felt hard to be the odd person out by standing up. We explored mechanisms for engaging with colleagues and management to make taking "movement snacks" understood, accepted, and more viral. **Big takeaway here: sharing with people what you're planning, and looking for support and understanding, can help reduce the perceived risk of trying something new.**

The [Cochrane Collaboration](#) recently released a [Cochrane Review](#) (a systematic review that synthesizes the results of multiple studies to determine the best ways to protect workers against health risks and dangers in the workplace), on interventions to reduce sitting at work.³ The main conclusion was this: we don't have enough good data yet. According to Cochrane, available research on the topic is "low quality" in terms of protocols for study. It recommends better ways to look at this effect in the workplace and notes that two studies are under way to do just that. Despite the lack of high-grade studies, the significance of sedentarism as a health problem is unequivocal. Sedentarism must be addressed systemically rather than at the individual level if we are to have a meaningful impact on reversing its effects.

From the research available, indicators suggest more benefit than harm from using sit-stand desks as interventions. My colleagues and I have looked at the effects of standing on cognitive performance, and the only task we found that was done significantly better sitting down was multitasking,⁴ which other considerable research shows we're bad at anyway.






Among the studies the Cochrane Review considered were environmental interventions, such as using sit-stand desks and encouraging brisk walking for breaks and walking to see colleagues rather than emailing. For sit-stand desks, promising findings include reductions in musculoskeletal pain and in sick time off of work. When researchers added information and counseling to the introduction of sit-stand desks, uptake was greater. This approach reduced sitting time per 8-hour workday by 23.5%. In addition, there was a 9.7% decrease in duration of sitting episodes lasting at least 30 minutes, and at follow-up participants reported feeling more productive when using these interventions.

Technology on its own is not a solution to sedentarism at work. Rather, we need environments that are conducive to movement, both physically and culturally. From related research, we know that more active people are cognitively sharper, deal better with stress, and report fewer days of sick time. If we want to increase the positive effects (on employee engagement, vigor, and sick time used) that even small-scale movement interventions seem to achieve, we

may want to consider rethinking our work. Incorporating more movement as part of work is to our industrial and social benefit. And while we're thinking about that, we may also want to think about how to support the rest of the brain-body connection, in terms of work practices around food, sleep, engagement with others, and learning and practicing new skills— but I leave that for another time. Meanwhile, time to go walk about. Join me?

Editors' Note: For more on sedentary work, check out our [Conferences, Webinars, and Trainings section](#) for information on a Total Worker Health Webinar exploring this topic!


References

1. <http://www.ncbi.nlm.nih.gov/pubmed/21785350#> 
2. <http://dl.acm.org/citation.cfm?id=2729485.2729509&coll=DL&dl=ACM&CFID=526771758&CFTOKEN=44732674> 
3. http://www.cochrane.org/CD010912/OCCHEALTH_workplace-interventions-for-reducing-sitting-time-at-work 
4. <http://www.omicsgroup.org/journals/assessing-the-effect-of-self-positioning-on-cognitive-executive-function-2165-7556.1000110.pdf>  

Updates from the NIOSH Centers of Excellence

[The Center for the Promotion of Health in the New England Workplace \(CPH-NEW\)](#)

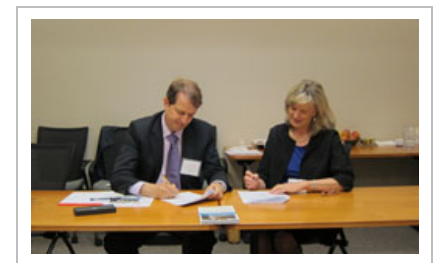
CPH-NEW Co-Director Laura Punnett gave two TWH presentations at the 31st International Congress of Occupational Health in Seoul, Korea (May 31–June 5): “Employee participation as a systems approach to intervention planning: The Center for the Promotion of Health in the New England Workplace (CPH-NEW)” and “Use of resident handling equipment by nursing aides in long-term care: Associations with work organization factors at the individual and workplace levels.”

CPH-NEW recently released a [CPH News & Views](#) article on [Assault among nursing home workers and frequency and severity of musculoskeletal pain](#) . CPH News and Views is a semimonthly column on emerging topics related to healthy workplaces.

Editors' Note: CPH-NEW also recently debuted three peer-reviewed publications! For more details, check out this issue's ["New Publications and Resources."](#)

[Harvard Center for Work, Health and Well-being](#)

The Center recently signed a Memorandum of Understanding with Brazilian Social Services for Industry (SESI) at NIOSH headquarters in Washington, DC. The overall objectives are to collaboratively conduct research and transfer knowledge of approaches to improve the health, safety, and well-being of workers. Pictured are Dr. Glorian Sorensen of the Center and Rafael Esmeraldo Lucchesi Ramacciotti of SESI.







The Center's All the Right Moves (ARM) research team recently participated in National Safety Week activities, providing resources to construction workers about health, safety, and well-being during coffee and lunch breaks at four sites in the Boston Area.

Editors' Note: The Center has also recently debuted two publications! For more details, check out this issue's "New Publications and Resources."

[University of Iowa Healthier Workforce Center for Excellence \(HWCE\)](#)




HWCE Partners with Heartland ERC for Total Worker Health Symposium



On April 16 and 17, HWCE and the Heartland Center for Occupational Health & Safety hosted the [17th Annual Occupational Health Symposium](#)  , which was dedicated entirely to Total Worker Health (TWH). More than 100 employers, occupational health and safety professionals, academics, and students attended the symposium. Featured keynote speakers included L. Casey Chosewood, MD, MPH, Director of the NIOSH Office for Total Worker Health, and Bonnie Rodgers, DrPH, COHN-S, LNCC, FAAN, from the University of North Carolina-Chapel Hill. Presenters and panelists included representatives from Mayo Clinic, NIOSH TWH Affiliates from the Nebraska Safety Council and SAIF Corporation, and local businesses and professionals from diverse sectors. Slides from several of the presentations are available on the [HWCE website](#) . Additional information about the event can be found in the [UI College of Public Health E-News](#) .

Editors' Note: HWCE is also announcing the launch of a video series! For more details, check out this issue's "New Publications and Resources."

[Oregon Healthy Workforce Center \(OHWC\)](#)


As part of OHWC Pilot Program, two projects have been awarded a year's funding of \$25,000 each. The aim of the Program is to expand OHWC's portfolio of effective intervention research that integrates occupational safety and well-being.

In May, OHWC Director, Dr. Kent Anger delivered a keynote speech on Total Worker Health at the [National Occupational Research Agenda Symposium](#)  , sponsored by the Midwest Center for Occupational Health and Safety (MCOHS) and the Upper Midwest Agricultural Safety and Health Center (UMASH). Dr. Anger also traveled to Seoul, South Korea, to attend the [31st International Congress on Occupational Health](#) , where he chaired the session on Integration of Health Protection and Health Promotion as Total Worker Health®: Perspectives From Across the Globe, in addition to presenting Well-Being as an Essential Element of Total Worker Health and Empirical Research on Integrated Health Protection and Health Promotion Interventions.

Dede Montgomery, Senior Research Associate and Outreach and Education Lead for OHWC, recently returned from spending 2 weeks in Thailand, where she shared her industrial hygiene and Total Worker Health expertise with [OHSU's Global Southeast Asia](#)  program. Dede also participated in a roundtable on Total Worker Health at the [American Industrial Hygiene Association Conference](#)  in Salt Lake City, Utah.

News from our Affiliates and Partners

We are pleased to announce six new Total Worker Health Affiliates!

[ISSA—The Worldwide Cleaning Industry Association](#) : As the leading trade association for the cleaning industry worldwide, ISSA is committed to helping its members change the way the world views cleaning. ISSA promotes the vision that cleaning is an investment in human health, the environment, and an improved bottom line. ISSA members supply

cleaning products and services to institutional, industrial, and commercial facilities that enhance the quality of the indoor environment for the benefit of workers and other occupants. ISSA serves as a resource for knowledge and standards regarding professional business practices and for making the scientific connection between cleaning and health.

Laborers' Health & Safety Fund of North America (LHSFNA) [↗](#): This joint labor-management trust fund was founded by the Laborers' International Union of North America (LIUNA), representing more than 500,000 working men and women in a variety of occupations throughout the United States and Canada, and its signatory contractors. LHSFNA conducts research, develops policy, provides technical support, and disseminates information to LIUNA members, health and welfare funds, and LIUNA's signatory contractors. Besides focusing on safety on job sites, LHSFNA is (1) developing programs to prevent occupational exposures that can lead to chronic health conditions later in life, (2) raising awareness to limit exposures that happen both on and off the job, and (3) addressing special concerns of multi-employer and short-term employment industries such as construction.

University of California, Berkeley School of Public Health [↗](#): The Labor Occupational Health Program, (LOHP), Center for Occupational and Environmental Health, University of California Berkeley School of Public Health, educates and empowers workers and communities to take an active role in making workplaces safe, healthy, dignified, and just. LOHP is committed to serving the needs of workers and communities most at risk, including low wage workers, immigrant workers, youth, workers with disabilities, and communities of color. LOHP provides training and education, conducts participatory research, and consults on the development of workplace health and safety standards, programs and policies. The program has also launched the Healthy Jobs Initiative, which creates a broader, more holistic, and comprehensive approach to worker health and safety issues and highlights the contribution of work to overall well-being and health.

University of Georgia [↗](#): The Workplace Health Group in the College of Public Health of the University of Georgia has worked with the idea of integration for more than 20 years. The group emphasizes the interrelationship of healthy people, healthy places (environments), and productivity. It recently received a grant from the National Heart, Lung, and Blood Institute to research and implement workplace chronic disease self-management programs.

University of North Carolina (UNC) [↗](#): Through its established NC Occupational Safety and Health Education and Research Center, UNC has been a leader in occupational safety and health research and continues to innovate through its efforts in Total Worker Health. The university actively conducts outreach with its own employees and local partners and will be conducting research as part of the CDC-funded Coordinating Center for Workplace Health Research Network (CCWHRN). UNC is building workforce capacity by developing a competency-based curriculum for an academic certificate program for Total Worker Health, modeled after an integrated approach in the Occupational Health Nursing program curriculum. New professionals skilled in the integration of health protection and health promotion will be trained through the North Carolina Occupational Safety and Health Education and Research Center (UN OSERC).

Western Kentucky University (WKU) [↗](#): WKU is advancing an integrated approach to worker safety, health, and well-being through its research, curriculum, and internal employee programs. The university is developing new interdisciplinary coursework to build capacity for a new generation of Total Worker Health professionals. WKU is also committed to providing a culture of safety and health for its faculty, staff, and students through collaborations among its campus programs.

To view all of the current TWH Affiliates, please visit [/niosh/TWH/affiliate.html](https://www.cdc.gov/niosh/TWH/affiliate.html). Participation in the Affiliate Program is voluntary and intended for academic institutions, labor organizations, public sector entities, and nonprofit associations that align with the principles of a Total Worker Health approach. If your organization is interested in becoming a NIOSH

TWH Affiliate, please visit the NIOSH Total Worker Health website at </niosh/twh/affiliate.html> or contact the NIOSH Office for Total Worker Health via email at twh@cdc.gov.

New Publications and Resources

Five New Publications from Centers of Excellence for Total Worker Health

[Understanding the hospital sharps injury reporting pathway](#)

In this study from the Harvard T.H. Chan School of Public Health Center for Work, Health, and Well-being, authors compared patient care workers' survey responses regarding sharps injuries and number of injuries that were recorded in the Occupational Health Services (OHS) Database. Perceived safety practices on hospital units were positively associated with respondents' saying they reported sharps injuries, but not with whether reported injuries appeared in the OHS data. The authors suggest that simpler, more direct reporting mechanisms should be considered and that facilities need to understand why reported injuries are not recorded in OHS data.

[Supervisors' support for nurses' meal breaks and mental health](#)

Hurtado et al., also of the Harvard T.H. Chan School of Public Health, examined the association between frequency of meal breaks and psychological distress among nurses, focusing on supervisors' support for meal breaks. The authors found that nurses on units with more supportive supervisors more frequently took meal breaks and, moreover, more frequently had lower average levels of psychological distress. Interventions to address supervisors' support for staff meal breaks might be useful to promote the mental health of their staff.

[Musculoskeletal disorder symptoms in correction officers: Why do they increase rapidly with job tenure?](#)

This past March, investigators at the Center for the Promotion of Health in the New England Workplace (CPH-NEW) described the relationship between job tenure and musculoskeletal disorders in correction officers. The study findings help build the evidence base for interventions to improve work organization and job design for corrections officers, particularly with regard to job stress.

[Health behaviors and overweight in nursing home employees: Contribution of workplace stressors and implications for worksite health promotion](#)

Also by investigators at CPH-NEW and partners, this report describes a study of the relationship between a broad range of workplace stressors and obesity, cigarette smoking, and physical inactivity. Among the findings were that young workers are disproportionately impacted by working conditions and that strenuous physical work and psychosocial strain are disproportionately common among low-wage workers.

[Assessing organizational readiness for a participatory occupational health/health promotion intervention in skilled nursing facilities](#)

CPH-NEW researchers affiliated with the University of Massachusetts Lowell examined the organizational readiness of five nursing facilities for a participatory occupational health and health promotion intervention. The selection criteria were then evaluated, with implications for effectiveness and sustainability of interventions.

Resources

Total Worker Health® Essentials Video Series, The University of Iowa Healthier Workforce Center for Excellence (HWCE)

Employers seeking evidence-based ways to improve employees' safety and health, along with the bottom line, can watch a free online series created by HWCE. The videos, available at www.totalworkerhealthessentials.org, help small businesses tailor innovative methods to their workplaces. They feature tips and best practices from small business leaders and occupational safety and health researchers. Taking the NIOSH-developed Total Worker Health® approach, the series addresses development, implementation, and evaluation of workplace programs, as well as employer concerns such as ergonomics, stress, and safety.

“Go Ergo!” with Videos from TWH Affiliate SAIF

“Listen, all you people in office-land!” NIOSH TWH Affiliate [SAIF Corporation](http://www.saif.com) has launched a series of short office ergonomics videos, including a safety-rap with practical ergonomic tips and videos dedicated to workstation adjustment, posture, and alternative office workstations. To watch the full video series, visit <http://www.saif.com/ergo>.

Proceedings: Integrating health and safety in the workplace: How closely aligning health and safety strategies can yield measurable benefits

These are the proceedings from a 2014 ACOEM and UL summit meeting on integrated health and safety. The document compares seven national and international programs aimed at creating a culture of health and safety in the workplace. It also includes a checklist to help employers in evaluating integrated health and safety guidelines.

Considerations for Incorporating “Well-Being” in Public Policy for Workers and Workplaces

In this article, NIOSH authors discussed how focusing on “well-being” may be one way to broadly address workforce functioning and productivity. The document reviews definitions of well-being, various domestic and international initiatives that already incorporate well-being into research, guidance, and regulation; and the benefits of further operationalizing the concept.

Conferences, Webinars, and Trainings in Support of NIOSH Total Worker Health™

Sedentary Work: Implications and Interventions for Worker Safety and Health

On July 13, the Office for Total Worker Health hosted a sold-out presentation on “Sedentary Work: Implications and Interventions for Worker Safety and Health,” part of the NIOSH Total Worker Health Webinar Series. If you missed out

on the live session, the [recording](#) is now available! Questions addressed include the following: What impacts might sedentary work have on injury risk? What impacts does it have on chronic disease? What are some options for addressing physical inactivity at work, and how might the effectiveness of these options vary? What factors influence how likely someone might be to use interventions for sedentary work? And are there key safety and health considerations for ensuring that the interventions themselves are keeping workers protected? To view the presentation and learn about other webinars, please visit the [NIOSH Total Worker Health Webinar Series](#) page.




Shift Work and Long Work Hours for Nurses: New NIOSH Training (Available Now)

[NIOSH Training for Nurses on Shift Work and Long Work Hours](#), the result of collaboration with healthcare stakeholders, is derived from the literature on work hours, sleep, and circadian rhythms. It relays associated risks such as injury and

death due to fatigue; chronic cardiovascular, gastrointestinal, and musculoskeletal diseases; diabetes; cancer; mood disorders; adverse reproductive outcomes; patient-care errors; and vehicle crashes. The program covers ways for nurses and managers to reduce risks, such as improving the scheduling and organization of work. The free, self-paced course has quizzes and video testimonials and can be used on desktop and mobile devices. Continuing education is available.

Job Stress: A Continuing Education Program for Today's Nurse (Available Now)

The Center for Promotion of Health in the New England Workforce (CPH-NEW) and the University of Massachusetts Lowell School of Nursing have created an online, on-demand continuing education program for 4 contact hours. The program, aimed at reducing job stress in the nursing profession, comprises four modules: Introduction to Nursing Job Stress, Stressors in the Healthcare Workplace, Impacts of Job Stress, and Stress Prevention and Coping Strategies. [View the full program](#) . While these training resources are geared toward nursing professionals, many of the recommendations and strategies apply to many job settings.

Upcoming Events

Want more frequent updates on where Total Worker Health will be presenting next? Check out our new [Total Worker Health Events Calendar](#)! We invite our partners and stakeholders who are hosting a conference, meeting, or other TWH event to submit details via our [online submission form](#).

At the 2015 International Brotherhood of Boilermakers Industrial Sector Operations Conference, August 5-8, 2015, Dr. L. Casey Chosewood will present a Plenary Session and subsequent workshop titled, "Total Worker Health®: Creating Safer, Healthier Work."

Dr. Chosewood will present a keynote titled, "NIOSH Total Worker Health®: What's Work Got to Do With It?" at the 11th Annual Boilermaker Industry Tripartite Conference-Niagara on the Falls, Ontario, Canada, August 16-18, 2015.

Dr. Chosewood will present "Seven Critical Strategies for A Healthier, Safer And More Productive Workforce" at the Association of Occupational Health Professionals meeting in San Francisco, CA, September 8-9, 2015.

Dr. Chosewood will present "Total Worker Health®: What's Work Got to Do with It?" at the Michigan Occupational & Environmental Medicine Association 2015 Annual Scientific Meeting, in Lansing, MI from September 18-19, 2015.

Dr. Chosewood will present "Maximizing Safety and Well-being in Your Organization: A Safety Professionals Guide to Advancing Total Worker Health®" at the Panhandle Safety and Wellness Council meeting in Gering, NE, September 22-23, 2015.

Dr. Chosewood will present "An Introduction to NIOSH Total Worker Health®: What's Work Got to Do with it?" at the Western Occupational Health Conference 2015 in Tucson, AZ, September 24-26, 2015

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