



Wellness Report

Welcome to the first *Wellness Report* of 2013. Many of us start the New Year with resolutions that we hope will improve our life in some way. However, all too often, our commitment to what we have resolved does not make it past March. According to a 2007 study by Richard Wiseman from the University of Bristol, the failure rate is 88%. That is somewhat surprising considering that we nearly always choose the resolution because we know it will be good for us in some way and are usually confident of success at the beginning. Most of those resolutions relate to bettering our health and wellness (body and mind), such as improving our fitness level, losing weight, stopping smoking or eating better. If you have made a resolution to increase your health and wellness (H&W) knowledge this year, I am confident your success rate will be 100%. Why? Because you are an H&W Branch member!

The H&W Branch advisory committee did not adopt any specific resolutions for 2013, however, we continue to have fundamental goals for our branch that we hope to advance and improve on through the year. One goal is to become a "must join" branch of ASSE. We want our members to see and experience the value of their membership. We strive to do this by providing up-to-date and topical H&W information and resources that members can use personally and professionally. *Wellness Report* is one avenue for distributing that information. I am also excited to announce the following planned events for 2013, of which I encourage you to take advantage. The first is our H&W Branch open meeting on April 12. All of you are invited to attend this open teleconference where we will share with you what the advisory committee is up to in 2013, volunteer opportunities and updates from some of our committee members on how H&W has impacted them and/or their employers. You should have received an e-mail invite for this open meeting, and additional information is available in this publication and on the ASSE calendar. At Safety 2013, we will have two events—the H&W roundtable and branch meeting. If you are attending the conference, we encourage you to attend one or both events to learn more about H&W and to network with others interested in H&W. In September, we will host a webinar on fatigue management for shift workers. If you have employees who work varied shifts, I highly recommend attending to learn strategies to increase the safety, health and wellness specific to these employees.

I look forward to meeting many of you during our open meeting and Safety 2013 events! May you have a healthy, well and successful 2013!

Jill Kelby

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Health & Wellness Branch

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Obesity & the Workplace: Direct, Indirect Costs & the Role of Wellness Education

By Thomas A. Sherwood, M.D., Ph.D.

This is Part II of a two-part series. [Click here](#) for Part I.

Health & Productivity Benefits Associated with Weight Loss

Strong evidence indicates that weight loss in overweight/obese persons improves health risks associated with cardiovascular disease and Type 2 diabetes. Overweight/obese persons who lose just 5% to 10% of body weight can achieve substantial health benefits (Mayo Clinic Health Letter, 2005).

From a cardiovascular standpoint, weight loss can facilitate reductions in blood pressure in both hypertensive and non-hypertensive overweight/obese persons as well as favorably impact blood lipid profiles by lowering triglyceride levels and raising HDL cholesterol levels (Poirier, 2001). Additionally, there is a wide acceptance that obesity should be the primary target in management of metabolic syndrome as weight loss has been shown to lower blood cholesterol and triglycerides, raise blood HDL cholesterol levels, lower blood pressure and decrease insulin resistance (Camm, 2006). It has been well established that modest weight loss and regular physical activity can help prevent Type 2 diabetes (Kalyani, 2013). Findings from one study (Foster, 2009) indicate that clinicians and their patients can anticipate that weight loss will result in significant and clinically relevant improvements in obstructive sleep apnea patients with Type 2 diabetes. The tendency for obese patients to have compromised respiratory function by way of decreased lung volumes, higher respiratory rates and decreased total respiratory compliance can be reversed by weight loss (Littleton, 2012).

Musculoskeletal pain, particularly secondary to osteoarthritis, may be associated with obesity; researchers in one study ascertain that weight loss reduces biomechanical stress on load-bearing joints, thereby reducing pain responses (Kotowski, 2010). It has been established that weight loss in obese individuals with knee osteoarthritis is clinically beneficial, both for pain reduction and improved function (Lee, 2012). It has also been reported that weight loss in obese persons is associated with improved quality (proteoglycan content) and improved quantity of medial articular knee cartilage, the investigators concluding that weight loss may potentially lead to a lesser need for total joint replacements with consequent important public health implications (Anandacoomarasamy, 2012). Additionally, body fat has been reported to favor knee cartilage loss over time in a study involving older adults with ages ranging from 51 years to 81 with a mean of 62 years. In contrast, lean mass was protective; the authors conclude that strategies to decrease body fat and increase lean mass favor reduced knee cartilage loss in older adults (Ding, 2013).

Declines in skeletal muscle mitochondria (subcellular structures involved in energy production) have been implicated in the development of sarcopenia (Peterson, 2012). The authors concluded that strategies, such as exercise and caloric restriction, may improve mitochondrial function and thereby diminish the likelihood of developing sarcopenia.

When combined with healthful eating habits, exercise has been reported to have a synergistic effect on body weight reduction beyond the effect of diet alone (Laskowski, 2012). Exercise may induce skeletal muscle adaptations and more optimal functioning of endothelial cells, which line blood vessels throughout the body, in overweight and obese men and women independent of weight loss; this in turn can result in more



favorable blood lipid profiles, enhanced insulin sensitivity and consequent improved glucose metabolism, decreased proinflammatory mediators and decreased blood pressure (Gaesser, 2011). These findings indicate that overweight and obese individuals should be supported in participating in regular physical activity and more healthful dietary habits even in the absence of significant weight loss. Additionally, a recent Japanese study reports that visceral (deep abdominal) fat, which is particularly prone to facilitating metabolic derangements involving blood pressure, blood lipids and glucose, has been shown to be susceptible to reduction in amount through daily accumulation of short periods of physical activity (Ayabe, 2013), which in turn is a potentially practical strategy readily utilizable by individuals with full-time work and busy schedules.

Key Contributors to the Obesity Epidemic

The etiology of the current obesity epidemic is complex and multifactorial and includes genetic, environmental, social, racial/ethnic, psychological and behavioral factors. Obesity is primarily a consequence of energy regulation imbalance in the body involving energy intake (eating) and energy output (physical activity) wherein a small positive energy balance persists over a sufficiently long time (Bray, 2008). Although a variety of factors can promote a positive energy balance, two particularly salient factors are inappropriate dietary choices and inadequate physical activity, which can potentially facilitate an imbalance in favor of energy intake, with excess calories being stored in fat cells, largely as triglycerides. Increased energy intake has been a concern in the U.S. over the past several decades, enough to explain weight gain in the U.S. population (Swinburn, 2009).

From 1971 to 2000, obesity prevalence in the U.S. has increased from 14.5% to 30.9% (Flegal, 2002). During this time, an increase in average amount of food energy consumed was noted for both men (168 calories per day) and women (335 calories per day) (Wright, 2004). Several prominent examples of inappropriate dietary habits are as follows.

As Americans have become more reliant on energy-dense, large-portion and fast-food meals, the association between fast-food consumption and obesity has become a substantial public health concern (Rosenheck, 2008). Portion size and caloric content in restaurants/fast foods have markedly changed; for example, a typical hamburger in 1957 weighed 1 ounce with 210 calories; by the early 2000s, the typical hamburger weighed 6 ounces with 618 calories with some hamburgers exceeding 1,200 calories and with 75 grams of fat as opposed to 10 grams of fat recommended for an entire day (Brownell, 2004). Fast-food meals commonly have several characteristics, each of which has been linked to facilitating development of insulin resistance: they are relatively cheap, energy-dense, palatable, are high in dietary fat and fructose (a type of sugar) and increase the risk of overeating. Fast-food consumption has also been cited as a strong contributor to the metabolic syndrome epidemic and all of its constituents (Elvira, 2005).

Overconsumption of simple sugars, particularly fructose, is a key facilitator of development of insulin resistance (Basciano, 2005). Fructose is metabolized by the liver into triglycerides with subsequent elevated blood triglyceride levels, which in turn promote insulin resistance (Schinner, 2005). Additionally, evidence shows that fructose-containing beverages may compromise hepatic (liver) insulin sensitivity and adversely affect lipid metabolism (Aeberli, 2013). The increase in obesity over the past several decades has paralleled the increasing use of high-fructose corn syrup, which first appeared just before 1970; current soft drinks and many other foods are sweetened with it as it is relatively inexpensive and has useful manufacturing properties (Bray, 2008). Soft drink consumption can play a key role in promoting obesity given that a 20-ounce soft drink may have 230 calories. If an individual were to add one bottle per day to his/her diet, it would constitute adding roughly 24 pounds of extra calories per year. Conversely, for an individual consuming one bottle of soft drink per day, terminating this activity without any other dietary changes could potentially remove 24 pounds of extra calories over a 1-year period (Brownell, 2004).

Additionally, the food environment in the U.S. has markedly changed over the past several decades due substantially to a plethora of foods rich in sugar, fat, salt, along with various flavor and food additives with a consequent enhanced tendency for many individuals to overconsume. Whether or not such "hyperpalatable foods" potentially facilitate an addictive process is an area of considerable controversy; however, research evidence suggests that some of these foods may activate neurocircuitry within the brain in ways similar to that observed in individuals with drug addictions (Gearhardt, 2011; Blumenthal, 2010). Both food and drugs have potentially strong reinforcing effects mediated in part by way of sharp dopamine increases in brain reward centers; in vulnerable individuals, this may markedly impact the brain's homeostatic control mechanisms (Volkow, 2013).



Compounding the overall increased caloric consumption over the past several decades in the U.S., a corresponding decline in physical activity has also been noted. Over the past 50 years, the daily occupation-related energy expenditure has decreased by more than 100 calories, a reduction, which accounts for a significant portion of the increase in mean American body weights (Church, 2011). Additionally, a sedentary lifestyle increases the likelihood of developing insulin resistance (Colberg, 2012). Furthermore, substantial differences exist in intensity, frequency and duration of physical activity by weight status wherein significantly more normal-weight adults were reported to engage in moderate and vigorous intensity activities and for longer duration than did their overweight and obese counterparts (Spees, 2012).

As a consequence, there is a critical need for Americans' lifestyle habits to change at home and in the workplace to correct this imbalance (Deusinger, 2012). Healthcare professionals can play a key role in motivating individuals to control, and where appropriate, lose weight by providing healthy weight loss strategies and correcting misconceptions about obesity (Yaemsiri, 2011).

Impact of Worksite Wellness Programs

In the past decade, CDC Task Force on Community Preventive Services has recommended various interventions at worksite settings to maintain or achieve healthy weight; such approaches have included nutrition education, physical activity prescription and behavioral skills development and training (Katz, 2005). The remainder of this section highlights a variety of worksite wellness program studies since 2001 with reported positive findings. This is followed by a brief discussion pertaining to favorable general strategies regarding employee wellness promotion.

Given that the prevalence rates of hypertension, dyslipidemias and the metabolic syndrome increase significantly as employees' BMIs increase from normal to overweight to obese, it has been reported that worksite programs targeting an incremental progression in body weight reduction can be beneficial for both employees and employers (Hertz, 2004). These authors further underscored the need for wellness promotion, which focuses on Type 2 diabetes, dyslipidemia and hypertension through awareness of healthy eating and regular physical activity. Along these lines, a Malaysian study reported findings from a 2-year follow-up of the impact of a worksite health program that consisted of an intervention group that received intensive individual and group counseling on diet and physical activity in contrast to a group that received only minimal lifestyle change education; the former group demonstrated a significant reduction in mean total cholesterol levels compared to the latter group (Moy, 2006).

Investigators reported findings from a study in which 98 female overweight/obese healthcare workers demonstrated a significant decrease in body weight, body fat, waist circumference and blood pressure along with increased aerobic fitness following diet, physical exercise and cognitive training (Christensen, 2011). Another study determined that a multicomponent, 12-week pilot wellness program was effective in reducing cardiovascular disease risk, favorably impacting changes between pre- and post-intervention measurements of total cholesterol, LDL cholesterol, triglycerides and body weight (White, 2007). An Australian workplace-based weight-loss program of 3 months' duration involving one information session, program booklets, group-based financial incentives and an online component was determined to facilitate significant weight loss and health outcomes in overweight/obese male shift employees (Morgan, 2011). A Singapore-based study determined that a 3-month weight-loss program involving nutrition education and physical activity sessions yielded beneficial anthropomorphic and fitness changes among those individuals with greater program participation (Vasquez, 2012). Along these lines, a Chinese-based study reported that workplace health promotion activities enhanced occupational safety and health management at one pharmaceutical company, the authors concluding that comprehensive workplace health promotion activities are both feasible and effective (Li, 2012).

Although studies have shown that worksite health promotions in large companies facilitate a reduction in employer health costs and chronic disease risks, less is generally known about such programs in relatively small organizations. However, a recent study involving 172 employees demonstrated cost effectiveness of worksite health promotion with improvement in coronary heart disease risk factors in participating employees (Allen, 2012).

Evidence shows that some workplace health programs can positively affect presenteeism (Cancelliere, 2011). The authors of this study found that successful programs provided organizational leadership, health risk screening, individually tailored programs and a supportive work culture. It has also been determined that improvement of employee health and wellness through efforts aimed at achieving healthier body weights will likely reduce short-term disability events that decrease worker productivity (Arena, 2006). Employers can effectively decrease obesity, lower their healthcare costs, decrease absenteeism and increase employee productivity through worksite obesity prevention programs (Chalupka, 2011). In one



study that examined the relationship between changes in health risks and changes in work productivity, it was determined that a reduction of one health risk improved presenteeism by 9% and decreased absenteeism by 2% (Pelletier, 2004); the authors concluded that reductions in health risks are associated with positive changes in work productivity.

One study examined the relationship between physical activity and healthcare costs across different weight categories (normal, overweight and obese) using data obtained collectively from more than 23,000 employees of several corporations (Wang, 2004). The authors found moderately active (1 to 2 times/week) employees had approximately \$250 less paid healthcare costs annually than did sedentary employees (0 times/week) across all weight categories with an approximately \$450 differential noted in the obese category. They also reported that the largest increase in healthcare cost benefits involved employees who successfully transitioned from sedentary to moderately active lifestyles. It was concluded that wellness programs instituted as a strategy to control escalating healthcare costs should promote initiation and should facilitate maintenance of moderate physical activity as an integral part of the employee lifestyles.

Aerobic exercise has been reported to be a critical component of exercise programs designed to reduce body fat, particularly visceral body fat (Ismail, 2012). However, regular exercise programs need not be rigorous and intense to be beneficial as low-level endurance exercise has been shown to generate favorable metabolic improvements similar to those achieved by high-level intensity exercise (Poirier, 2001). Worksite counseling programs that facilitate physical activity can have long-term occupational health benefits (Proper, 2004). Additionally, a 24-week periodized worksite resistance training intervention was found to significantly reduce blood pressure, improve muscular endurance and flexibility along with a reduction in absenteeism during the 24-week period in participating employees (Zavanela, 2012). A 12-week German study found that structured, Internet-delivered exercise recommendations were not superior to Internet-delivered, nonstructured exercise recommendations in which employees chose workouts individually through an interactive website (Pressler, 2010). However, both approaches yielded significant improvements in waist circumference and aerobic exercise capacity, but the investigators noted that both strategies were limited by high dropout rates.

Guidance regarding healthful dietary habits can have favorable impact on employees. One investigation examined the results of sixteen studies in which eight programs focused on employee education with the remainder targeting change to the worksite environment, either alone or in combination with education (Ni Mhurchu, 2010). The investigators reported that worksite health promotion demonstrated moderate improvement in dietary intake. Similarly, it was noted in another study that while it is likely unrealistic to expect employees to shift from least to most healthful dietary habits, consistent movement toward healthier eating habits was associated with less weight gain (Pachucki, 2012).

One report examined the results of a systematic review of the effectiveness of worksite nutrition and physical activity to promote healthy weights for employees (Anderson, 2009). They found that worksite nutrition and physical activity programs achieve modest improvements in weight outcomes at a 6- to 12-month follow-up. Furthermore, the investigators reported their findings to be applicable to both male and female employees across a range of workplace settings.

These studies have highlighted many fairly recent worksite wellness program studies with a variety of approaches and reported positive outcomes. Although substantial progress and understanding have been made regarding the efficacy of employee health promotion programs along with evidence to support such programs, nonetheless, additional research is needed using studies with robust evaluation designs, sufficient follow-up, adequate power to detect meaningful differences and control for observable differences between wellness program participants and nonparticipants (Osilla, 2012). These authors examined articles from a variety of sources (eg., PubMed) for 2000-11 with comparison groups that evaluated various outcomes, such as health-related behaviors, physiological markers and healthcare costs. The investigators found mixed results regarding the impact of wellness programs and commented that the validity of these findings was lessened due to the lack of strong evaluation designs.

However, it is apparent that programs that yield a positive return on investment tend to be multilevel, multicomponent and comprehensive in scope (Pronk, 2009). Additionally, worksite environments and policies designed to support employee health are critical in facilitating employees to adopt and maintain healthy lifestyle behaviors (Aldana, 2012). Furthermore, evidence indicates a greater likelihood of successful outcomes in worksites that have integrated health and safety, which not only enhances favorable impact on health maintenance but also on employee productivity and injury protection (IOM, 2005; Punnett, 2009). Along these lines, NIOSH has developed Total Worker Health, which serves to



facilitate integration of occupational safety and health protection with health promotion for prevention of worker injury and illness and promotion of health and wellbeing (www.cdc.gov/niosh/twh/). This site provides substantial information and relevant resources to facilitate this process.

Conclusion

Obesity is a prevalent and significant clinical condition that additionally lays the groundwork for subsequent development of a variety of potentially serious disease processes that can adversely impact one's health and workplace productivity, both of which have considerable adverse economic impact to employers and to the national healthcare system. Given that the prevention and reversal of obesity are markedly influenced by lifestyle behaviors, particularly regular eating habits and physical activity, it is appropriate to use worksite wellness education as a tool to empower employees to more readily adopt appropriate lifestyles. This approach targets and addresses the fundamental root causes of common lifestyle-related health conditions, such as obesity. In contrast, allowing these conditions to develop without preventive lifestyle interventions and relying solely on typically costly clinical management is no longer a viable option given the current and projected healthcare landscape in the U.S.

Worksite wellness education activities should be an integral component of any comprehensive worksite wellness program, ideally one that integrates employee health promotion and health protection, thereby enhancing more favorable impact. Worksites are an excellent venue to facilitate wellness educational activities that can yield potentially strong benefits and positive ramifications that include and extend well beyond the workplace. ♦

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Sherwood became a medical wellness consultant due to his strong interest in the relationship between the pathophysiology (underlying cause) of various chronic diseases (e.g., obesity) and lifestyle. His wellness seminars have provided guidelines to employees at worksites in order to facilitate implementation of appropriate regular eating habits and physical activity to both prevent and potentially reverse these conditions.



Ergonomics Practice Specialty



The Ergonomics Practice Specialty (EPS) first began in 2007. EPS serves as a premier source of ergonomics information for ASSE members. In addition to publishing its triannual electronic publication *Interface*, EPS maintains an extensive listing of ergonomics resources on its website and is raising funds for an Ergonomic Scholarship to be offered by the ASSE Foundation. It also sponsors ergonomics-related sessions at ASSE’s annual Professional Development Conference and finds ways for EPS members to take part in National Ergonomics Month each October.

To join this popular practice specialty, visit www.asse.org/JoinGroups. Connect with EPS at www.asse.org/ps/ergonomics and on [LinkedIn](https://www.linkedin.com).

Employer Support for Work & Family Balance Reduces Safety Health Risks

By Leslie B. Hammer, Ph.D.

During the summer months, work-family stressors are high for employees caring for school-aged children. With children out of school during the summer, childcare arrangements for families who work can be extremely difficult to juggle. On top of that, the economic crisis has severely limited many families' ability to pay for adequate care.

Many employers are recognizing employees' need for quality and flexible childcare and are offering family-friendly benefits and programs for their employees. SAS Institute, located in Cary, NC, sets the bar as the top-ranked employer for balancing work and personal life by Fortune Magazine's *Best Companies to Work For in 2012*. SAS has high-quality child care at \$410 a month, 90% coverage of the health insurance premium, unlimited sick days, a medical center staffed by four physicians and 10 nurse practitioners (at no cost to employees), a free 66,000-square-foot fitness center and aquatic center, a lending library and a summer camp for children.

Recent surveys have found that decreased work-family stress is related to reduced injury risk and increased safety compliance and safety participation among workers. Further, evidence from the [Work, Family and Health Network](#) suggests that work-family stress is related to worker health and well-being. However, research is just beginning to uncover the significant links to occupational safety and health and work-family stress despite the mounting evidence that work-family stress is related to higher absenteeism, lower performance and higher job and family stress among workers and their families.



The [Oregon Healthy Workforce Center](#), a NIOSH Center of Excellence, is currently examining several workplace initiatives that integrate health promotion and health protection and their effects on health and safety of corrections officers, construction workers, young workers and home health workers, all including elements of work-life stress.

Five Tips for Employers to Help Their Teams Achieve Better Work-Family Balance

1. **Train managers and supervisors to be more supportive of work and family.** Recent evidence shows that employee support from managers and supervisors for family and work balance leads workers to report better health, improved job satisfaction and lower intentions to leave the company (Hammer, et al., 2011).
2. **Give workers more control over their work hours.** Increased control over when, where and how work gets done is related to improved health behaviors (Moen, et al., 2011).
3. **Create a resource guide for employees and their families.** For example, work with your human resources department to pull together a list of day camps for children of various ages.
4. **Be a role model.** Take some time off to be with your own family to show your employees you know this should be a priority for them as well, especially if stress is overwhelming them.
5. **Encourage and support flexible schedules.** Help employees come up with creative solutions for childcare coverage during the summer, such as working a compressed work week or taking 1 to 2 days off per week over the summer instead of one large vacation allotment. ♦

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Leslie B. Hammer, Ph.D., is a professor in the Department of Psychology at Portland State University. Hammer is the director of the Center for Work-Family Stress, Safety & Health, which is part of the Work, Family & Health Network. She is the associate director of the Oregon Healthy Workforce Center.



Integrating Ergonomics & Wellness at Honeywell to Enhance Employee Performance

By Keith Osborne, CEAS, EPM, MFT, EFR

At Honeywell in Colorado Springs, enhancing the productivity of our employees while cutting waste and mitigating injuries is what we are always trying to do. Although our primary focus is on the safety of our employees, we are constantly looking for ways to improve our employees' effectiveness, efficiency and productivity through a variety of platforms which, when working in unison, can bring about phenomenal results.

Integrating wellness and ergonomic programs into one process did exactly that. I believe that by integrating the two disciplines, they have become more effective and complementary. Both have the employees' best interests in mind as we try to impact their overall wellbeing, addressing the sedentary nature of some occupations and eliminating unhealthy movements in others, while improving the business's productivity.

Honeywell has developed an effective ergonomics program, impacting processes and procedures throughout the production spectrum. Those positive impacts are felt in increased productivity, decreased worker discomfort and lower health costs for the business with a positive return on investment. Ergonomics is an integral part of our six sigma process and is one of the keys to our Honeywell Operating System. It has become, along with our wellness program, an OSHA and Honeywell Best Practice. From 2009 to present, we have saved more than \$2.5 million in potential direct and indirect costs through proactive implementation of ergonomics (cost savings based on estimated cost of work-related MSDs from OSHA data). The total cost for this was \$85,000.

The process begins by getting the employee comfortable from the first day here with a one-on-one assessment followed by the employee-driven self-assessment of their workstation (3 to 4 weeks later) using our online tool (Comfort Zone by IBR) developed to give the employee more hands-on control of the work environment. The tool also provides metrics, allowing us to continuously improve our processes. I can now also reach our employees who are stationed at one of our 11 remote sites around the world without the extra expense of air travel. I can assess workstations through data and submitted pictures and videos, providing corrective actions and shipping the necessary equipment to the employee to install.

The tool also makes my job as the ergonomist easier and more effective by identifying who is most at risk, allowing me to target those employees for more one-on-one attention. Those employees who are at a lesser risk can reference our library of videos to help them with anything from adjusting their chair to proper mousing and keyboarding techniques, or they can follow the tips provided based on their input to the survey. Using these tools to validate the process already in place, as well as placing the process more in the hands of the individual employee, allows more time for expansion of the ergonomics program into other areas, such as manual material handling. The combination of one-on-one assessment using our onsite ergonomics lab, a similar tool developed by Auburn Engineers (eTools Shop) is used to assess and mitigate risk in our manual material handling program and is already paying dividends.

We have also developed a wellness program tied to the ergonomics program by focusing our wellness program on getting more employees up and moving through the use of proper stretching, exercise and the incorporation of sit/stand stations (more than 280/700 employees). The sit/stand stations have become popular with many of the users reporting more energy throughout the day as well as measureable weight loss, improved circulation and lower blood pressure (measured individually at one of our blood pressure stations within the facility). But sit/stand stations are not the only thing that is



Top: Sit/Stand Station
Middle: Treadmill Station
Bottom: Recumbent Bike Station



impactful on both an ergonomic and wellness level. We also have a unique training room and a full-size wellness (fitness) center.

Employees can use Honeywell's new training room to complete company-mandated online training at one of three stations. The Cyber Kiosk Room is equipped with a treadmill station, a recumbent bike station and an adjustable sit/stand station. The purpose of the room was two-fold. First, I wanted to provide a place where employees can get away from their desk to complete their training undisturbed. Second, I wanted to get and keep them moving, not as much as a gym, but enough to where they are not sedentary for the 30 to 60 minutes it takes to click through and complete a slide deck. The results have been outstanding. There has been a marked increase in on-time training completion (15% to 20%) compared to completion prior to the room's existence. It has also increased the number of employees who have signed up for our onsite wellness (fitness) center.



The Wellness Center is a 1,100-sq. ft. facility that has equipment throughout it. The room has an array of cardio equipment, free weights, weight machines and other strength and balance equipment (such as BOSU, TRX and kettlebells) to allow the user to either maintain their current wellness level or to improve and attain a higher level.

As the staff trainer (Master Fitness Trainer Certified), I also provide custom exercise plans to allow employees to stay focused on their individual fitness goals. More than 200 employees have taken advantage of this. Feedback from employees has been excellent.

As of this writing, 625 of our current population of 695 employees have signed up to use the room. It is free for anyone who works here. All that is required of employees is their attendance at a safety briefing where they learn how to use the room safely and complete a brief health questionnaire.

We also provide each new hire a proper stretching and lifting card, which is discussed at the one-on-one initial assessment and at the wellness center briefing. Although there is no formal stretching program, by issuing the cards, I have found that many employees complete the stretches daily and adhere to the proper lifting techniques shown to them. This has been validated by not having an injury related to improper lifting or poor preparation for the last 3 years.



Data here at Honeywell in Colorado Springs also suggest that when you have an effective wellness and ergonomics program in place and working in unison, you have a positive impact not only on employees' performance, but on their morale and the company's bottom line as well.

For instance, our overall performance as a business has increased by a steady 10% annually from 2009-12 while our work authorization closure rate (work authorizations are individual work packages within the overall contract) has paralleled that number. Individual worker performance is reflected in these numbers as well, but another telling statistic is the overall rate of decline for days away from work (a steady 5% decrease annually from 2009 to present). Employee satisfaction surveys have trended positively since 2009 when employees were asked how safe they feel and how invested the company is in their wellness and productivity.



The integration of ergonomics and wellness may be unique but I think viable and with a natural linkage to employee health and safety. Each program on its own can have profound benefits on the overall wellbeing of your employees, but together, you have a program that is well-rounded and takes virtually every aspect of employee performance into account, supporting company initiatives and saving costs. ♦

Keith Osborne, CEAS, EPM, MFT, EFR, is a health, safety and environmental (HSE) site specialist for Honeywell Technology Solutions Incorporated-Colorado Springs (HTSI-COS). He is a published author on the subject of ergonomics and is the owner of two Honeywell and OSHA best practices (ergonomics/wellness). He is a recipient of HTSI's HSE President's Award for his work in the fields of ergonomics, health and wellness, and emergency response. He is also a member of ASSE, HFES, AIHA and NFPA and holds two bachelor's degrees from NAU in Applied Management and Business Administration.



Member Spotlights

Dede Montgomery, MS, CIH

Organization: Center for Research on Occupational and Environmental Toxicology at Oregon Health and Science University, Oregon Healthy Workforce Center

Title: Health and Safety Specialist, Education and Outreach

Background: 25+ years in occupational health and safety

Why are you involved in this initiative: I have long recognized how important all aspects of health—physical, emotional and mental—are to our ability to do our job and to do it safely. Additionally, it is clear to me how events outside our job impact these aspects of health. My involvement with the Oregon Healthy Workforce Center, a NIOSH Total Worker Health Center of Excellence, allows me to better understand and support the research and to share that information and related tools with other occupational health and safety professionals and partner workplaces. ♦



Elizabeth Sawyer

Organization: CooperVision

Title: U.S. Manager, Occupational Safety & Health

Why are you involved in this initiative? As a safety professional, I see quite a few employee injury/illness reports that could have been minimized or avoided altogether if our employees were in their optimal physical condition. I truly believe that one of the best ways for a company to make an impact on both its employees and the company's bottom line is to invest in the health and wellness of its employees. I am fortunate to work for a company that clearly recognizes and supports this school of thought, through both words and action. ♦





Getting Started With Wellness: A Primer of Online Assessment Tools

Deb Fell-Carlson, RN, COHN-S

If you are just getting started, you may not be ready to do an assessment of your wellness program. However, an assessment tool can be invaluable in guiding implementation efforts.

Assessment is just as important to developing a comprehensive wellness program as it is to an injury prevention program. Assessment tools guide implementation and help identify gaps. A variety of online tools are available at no charge to you. Some guide you through the process of integrating wellness with your occupational safety and health program and other people-centered efforts. This strategy is called health and productivity management, also known by NIOSH as Total Worker Health. Other tools presented here are focused more on traditional wellness. See if one of these tools is right for your company.

Wellness Leadership Survey

One of the simplest assessment tools is the Wellness Leadership Survey published by the Wellness Council of America (WELCOA). This one-page tool allows you to assess your current condition in the context of corporate wellness but also prompts thought about where your leadership would like your company to be going forward. This tool does not focus on linking wellness with safety. [Click here](#) for this tool.

CDC Worksite Health ScoreCard

This tool, released by CDC, was released in 2012 and is an assessment tool for employers to prevent heart disease, stroke and related health conditions. It is a comprehensive tool that addresses many areas of wellness program planning. This tool takes a systems approach. Although it mentions the importance of hazard control in the early paragraphs of the publication, it does not specifically address safety. This is a lengthy document full of helpful resources and tools. It includes templates for action planning and budgeting, as well as other resources. [Click here](#) for this tool.

Health Enhancement Research Organization Best Practice Scorecard

The Health Enhancement Research Organization Best Practice Scorecard is one of the better known assessment tools for health and productivity management. It was developed by the Health Enhancement Research Organization in collaboration with Mercer. The site has a library of research articles, as well as links to the comprehensive tool. [Click here](#) for this tool.

Health Management Initiative Assessment

This tool is embedded in two different documents, both of which were published by the Partners for Prevention through a cooperative agreement with CDC. These documents approach wellness from the health and productivity management perspective. The first document, *Healthy Workforce 2010 and Beyond: An essential health promotion sourcebook for both large and small employers*, is a complete implementation guide that helps the reader understand the link between wellness and injury prevention. The assessment tool is found on page 36. *Leading by Example* also contains the assessment tool, but this document is directed to an executive audience and can be a useful tool to explain the importance of a collaborative approach to wellness and injury prevention. [Click here](#) for this tool. To access these two documents as well as several others, click on the Worksite Health link under Business Health.

Some companies have used wellness awards as an assessment tool to guide implementation. Many such awards are available. A few are presented below.

American Heart Association Fit-Friendly Employer Award

The application process includes an assessment tool that can be used to guide implementation. [Click here](#) for more information on this award.

Institute for Health & Productivity Management Corporate Health & Productivity Management Awards

This award has three levels based on specific criteria. The applications are available in PDF format at no charge. [Click here](#) for more information on this award.

WELCOA Well Workplace Awards

WELCOA's Well Workplace Awards recognize companies for fully embracing their responsibility for maximizing employee health and well-being. Companies can apply for one of four levels of award, depending on program maturity. [Click here](#) for more information on this award.

Healthiest Employer Awards

The Healthiest Employer Awards Program recognizes employers by evaluating responses to an online survey. The survey collects data across six key areas of wellness: culture and leadership commitment, foundational components, strategic planning, communication and marketing, programming and interventions, and reporting and analysis. Applicants are ranked by size. The assessment tool contains a weighted scoring system that compares your company against employers from your market across the country. There is a charge to obtain your results. [Click here](#) for more information on this award.

As with safety assessments, wellness program assessments are not a one-time activity. Repeat the assessment periodically to check and document your progress. Assessments take time up front but can help you develop and execute a high-quality, effective program. ♦

***Deb Fell-Carlson, RN, COHN-S**, is the policyholder safety and wellness adviser for SAIF Corp., a state-owned not-for-profit workers' compensation carrier. She has served in a variety of safety and health leadership roles in healthcare and general industry over the years, including the military, having retired from the Army National Guard Army Nurse Corps in 2003 after 27 years of service. Most recently, Fell-Carlson has had an active and visible leadership role in strategic efforts to help Oregon employers embrace an integrated approach to wellness and safety. She holds a B.S. in Nursing from South Dakota State University and an M.S. in Public Health from Oregon State University.*



Upcoming Live Webinars (11:00 am-12:30 pm Central)

[NFPA 654 \(2013\) on Combustible Dust Accumulated Outside of Equipment: How Much is Too Much?](#) (April 17)

[Risk Management Is More Than Safety](#) (April 24)

[Innovative Techniques for Safety in Confined Spaces](#) (May 15)

[90 Minutes to Safety Culture Excellence](#) (June 5)

[Social Media & Crisis Communications](#) (July 24)

[Zero-Incident Goals Create Risk-Taking Cultures: Learn to Measure What Matters](#) (July 31)

[Best Practices in Fatigue Management: Promoting Safety & Wellness for Shift Workers](#) (September 18)

On-Demand Offerings

[Workplace Wellness Web Fest](#)

[Making Metrics Matter](#)

[The CSP Experience](#)

[Z10-2012: Occupational Health & Safety Management Systems](#)



'Til Death do You Part

K. Lamorris Waller

Many Americans in the workforce have stressful careers and either travel to and from the job or work from home on a daily basis. Most workers show up on time every day and put in much effort to increase their productivity. However, in the American workforce, an employee has an abundance of rights. Employees receive days off, are entitled to the healthiest working conditions possible and have a reasonable or at least a manageable amount of work hours. While America can be one of the best places to begin a career, it seems workers in countries like Japan are more dedicated. So much so in fact that Japan is thought to be the only industrialized country that officially accepts "death by overwork," or *karoshi*, as a legal cause of death. *Karoshi*, along with *karojisatsu*, or suicide from work, have attributed to some 5,000 deaths per year due to depression and/or exhaustion.

A Japanese worker's daily workweek is different from that of an American worker. While Americans usually experience around two hours of commuting to or from work, a Japanese worker might spend as much as three hours traveling in each direction. And while many workers in America end their day around 5 or 6 o'clock in the evening, a Japanese worker may work until 7 or 8 at night, take a break with co-workers to dine and drink and then go back to work, sometimes until the early morning hours.

In recent years, Japan has had an increasing number of temporary workers pulling all-day shifts alongside full-time employees. Additionally, it has been common for manufacturing contractors to illegally supply their clients with employees as temporary staff. In 2004, the International Labor Association showed that Japan has the world's highest proportion of employees (27%) working more than 50 on-the-clock hours per week.

These working habits are common through all industries in Japan. In 2006, a court found that an employee of Toyota died of *karoshi*. A 45-year-old lead engineer for the Toyota Camry Hybrid, who worked more than 80 overtime hours in at least two months, collapsed at home. It was determined that he died of ischemic heart disease, which can result from extreme overwork. The worker's wife was eventually compensated even though courts had initially ruled that she would not receive anything from the automotive company. The hybrid car he was working on was to be exhibited at the 2006 Detroit Auto Show.

In 2007, another widow was compensated by a company after her 30-year-old husband collapsed and died at work. In that case, a Toyota employee died of overwork after logging in more than 106 hours of overtime in a month. It was reported by Toyota that the worker had died of an "irregular heart beat" in February 2002 after passing out in the factory at 4 am.

Although workers in Japan put in long hours on a daily basis, the issue of endless working hours lies within the Japanese culture more so than company rules and regulations. The Japanese have cultural traditions that date back more than 1,000 years. In addition to long workdays, the Japanese community has grown accustomed to living what Americans would call a stressful lifestyle in that they have always lived in very close housing quarters. In fact, according to an MSNBC report, 95% of the country is unstable for living because of the unlevel terrain. As a result, practically every square foot of flat land has cities or crops on top of it.

According to Asian Business Codewords, the Japanese government says that the Japanese act more like "one big happy family" than a country of single families like America. In most cases, at the end of a long workday, workers and bosses are more or less expected to have drinks together. Japanese workers, unlike typical American workers, are expected to show an almost undying loyalty to their employer. As a result, lifetime employment is common, and people believe that if they take care of their jobs in a sincere and professional manner and give their best effort every day, the company will thrive and in return will take care of them and their families.

Karoshi has taken the lives of many working men in Japan. It is so heavily male because Japan has traditionally held women in the role of servants and caretakers, while labeling men as providers. As a result, women in Japan are usually in charge of taking care of children and house finances while men go to work. This is why few women have died from *karoshi*.



Karoshi has become such an issue in Japan that in 1991, the Association of Karoshi Survivors was created. The rising court actions brought on by survivors of workers who died from overwork or suicide from overwork have directly attributed to government recognition. OSHA reported that suicide due to an occupational mental disorder, where significant impairment to a worker's normal ability of recognition, ability for action judgment or inhibitive ability to turn back from suicide, is considered compensable.

Mental stress and an accumulation of fatigue have both been added to the criteria of recognizing karoshi. One of the main factors playing into karoshi is the fact that the Japanese are taught to internalize their feelings, making any speech against working objectionable or even offensive. Because of this, many workers die instead of asking for a break or taking a day off. And while Americans can go so far as to sue their employers for unsafe and unhealthy working conditions, the Japanese remain loyal to their employers, literally until death. ♦

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K. Lamorris Waller worked as an editorial intern in ASSE's Council on Practices and Standards department during 2008 and 2009. He holds a degree in journalism from the University of Illinois, Champaign-Urbana.



Health & Wellness Conference Call

Please join us on our upcoming conference call, which is open to all Health & Wellness (H&W) Branch members and anyone else who is interested in the topic of health and wellness as it relates to safety.

When: Friday, April 12 at 11:00 am (Central)
Where: (712) 432-1000 (passcode: 570868990#)

Agenda

- Welcome and brief overview of the H&W Branch and current membership
- Advisory committee subgroups and their activities
- Benefits of health and wellness to our members "in their own words"
 - Safety professional both personally and professionally
 - Safety professional and their employer
 - Employer and risk management/insurance
- Upcoming H&W events
- Open comments/questions
- Meeting wrap-up





Welcome New Members

We want to thank everyone who has remained a loyal member of the Health & Wellness Branch and welcome the following members who recently joined. We currently have more than 200 members. If you have any colleagues who might be interested in joining the branch, please direct them to www.asse.org/JoinGroups. If you know anyone who might be interested in joining ASSE, please contact [customer service](#).

Group Benefits

- [Network](#) with industry professionals via LinkedIn
- Conference calls and annual [meetings](#)
- Triannual electronic [technical publications](#) and access to publication archives
- [Interviews](#) with top industry professionals
- [Publication](#) opportunities (earn COCs)
- Advisory committee [guidance and advice](#)
- [Volunteer](#) and leadership opportunities
- Discounts on group-sponsored [webinars](#)
- Group [sponsorship](#) on conference speaking proposals
- Mentoring services

These are the top-ranked member benefits. Please be sure to take full advantage of your membership and [e-mail us](#) with any questions.

Adewale Adenikinju
 Adnan Al Shammari
 Gordon Baldwin, SAIF Corp.
 Paul Beck
 James Cahoon
 Annette Calvert, KentuckyOne Health
 Bianca Coots
 Neville Critch
 Vickie Curtis, DaVita
 Susan Dierksen
 Leigh Freeman, SAIF Corp.
 Mikkel Hultin, DaVita
 Nishant Khatri
 Randy Kimball
 Karen Macatangay
 Derise Matthew, HM Insurance Group/Highmark Casualty
 Jodi Mulligan
 Gilbert Nelson
 Steve Phillips, Acoustal Control LLC
 Karen Richards, Stepan
 Ashley Simmons
 Clarita Torres
 Maria Vargas

Visit www.asse.org/JoinGroups
 for more information on our industry and interest groups.



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Safety 2013

ASSE's Professional Development Conference

Monday

Health & Wellness Open Meeting & Networking Event
Convention Center, Room N119 at 6:00 pm

Tuesday

Worksite Stretching Programs: Five Key Processes for Continuous Improvement
(Session 555)

Key Issue Roundtable #5: Tools to Engage Employees & Effectively Sustain Wellness
Programs (Session 572)

Thursday

Mindful Movements in the Workplace (Session 755)

The sessions listed above are sponsored by the Health & Wellness Branch.
For a full list of sessions and complete details, visit www.safety2013.org.



Resources

Health & Wellness Information: www.asse.org/ps/HW
Body of Knowledge: www.safetybok.org
Journal of SH&E Research: www.asse.org/AcademicsJournal
International Resource Guide: www.asse.org/IRG
Networking Opportunities: www.asse.org/connect
Publication Opportunities: www.asse.org/ps/write
Volunteer Opportunities: www.asse.org/ps/volunteers

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