

CPH News and Views

A semi-monthly column on emerging topics related to healthy workplaces

Issue #28: Understanding and Counteracting the Obesogenic Work Environment

Contributed by Suzanne Nobrega, CPH-NEW Director of Outreach and Dissemination

In the United States, obesity is a major public health problem, with about two of every three Americans overweight or obese¹. Obesity is associated with heart disease, diabetes, high blood pressure, osteoarthritis, depression and other chronic health conditions. Employers pay a large share of the associated health and productivity costs². In response, many employers focus on weight management as a core focus of company-sponsored health improvement programs.

Worksite interventions to address the problem of overweight and obesity are commonly designed to improve personal lifestyle factors that directly contribute to energy imbalance. Program components typically incorporate education, skill-building, and policy and environmental supports to improve diet and physical activity levels of employees. Effectiveness depends on high levels of program intensity and employee participation, and the weight loss achieved is often modest and difficult to sustain³. There is little or no focus on the physical and psychosocial conditions of work, even though these may be important drivers of weight gain.

Work-related predictors of weight gain—workplace “obesogens”

Organizational stressors can play an important role in the development of overweight, either through direct impacts on behavioral or metabolic processes, or indirectly as a consequence of illness or injury. Examples of specific work organization features associated with overweight include sedentary work (low activity leads to energy imbalance), shift work (disrupted/limited sleep produces changes in satiety/appetite, metabolism, insulin sensitivity), long shifts (12 hours on the job increases dependence on on-site foods), and job stress (alters eating patterns, lowers physical activity, increases injury risk, contributes to depression)^{4,5,6}.

Workplace safety and environmental hazards can also trigger changes in behavior and biology that lead to overweight. Exposures to chemical endocrine disruptors (such as pesticides and plastics) can alter hormonal regulation of satiety and insulin sensitivity, leading to increased body fat⁷. Dust and chemical irritants in the workplace (an important exposure for those using cleaning agents) can produce asthma, which in turn often reduces leisure-time physical activity⁴. Similarly, work-related injury can interfere with leisure-time physical activity, as well as cause depression⁸. Secondary to these effects, the use of medications to treat depression and injury (such as steroidal anti-inflammatory agents) are well documented for producing weight gain^{9,10}. Lower wage workers are especially vulnerable to exposures to many of these “obesogenic” features, having the lowest level of control over their working conditions and the fewest opportunities to access and benefit from company-sponsored health insurance and related preventive and wellness benefits¹¹. In a recent study by CPH-NEW, numerous low-wage workers reported weight gain related to time pressures, stress, and injuries at work¹².

Implications for workplace weight management programs

Worksite health promotion “best practice” already emphasizes policy and environmental changes (such as healthy vending and safe walking areas) to make healthy lifestyle choices easy or even the default. Even so, achieving weight management goals may be difficult in the absence of interventions to make the work organization itself more conducive to health and less “obesogenic.” What is needed, additionally, are *healthy organization* policies (see table below), in which the goal is to create conditions that do not trigger the biologic and behavioral pathways to overweight. Creating and implementing these types of policies and environmental supports in the organization necessarily requires leadership from senior managers and strong cross-functional collaboration outside of the traditional structures for workplace health, safety and wellness. Until we pursue healthy work organization as a goal for workplace weight management programs, health promotion programs will struggle to reach their full potential.

Examples of healthy work organization policies and environmental supports

Policy/Environmental Support	Rationale
Flexible work schedules	Help employees manage job demands, increase control, reduce stress
Shift schedules—rotate forward, not back	Minimize sleep deficits
Meal and break policies and facilities	Allow time and space for healthy eating
Culture of bi-directional communication and goal-setting	Promote employee control, stress management
Safety performance standards, regular audits, training	Minimize risk for job-related injury, strain (keep physically active, off medications)
Jobs designed with variety, career-paths	Encourage skill development, sense of purpose, self-efficacy; avoid stress, anxiety
Work stations and office layout design, meeting practices to encourage movement	Maintain physical activity; promote musculoskeletal health
Mental health/stress training for supervisors	Constructive recognition, response, and referral for distressed employees; avoid depression, unhealthy stress responses

Suzanne Nobrega provides job stress reduction training and conducts worksite intervention research and evaluations through CPH-NEW at the University of Massachusetts Lowell.

References:

1. <http://www.cdc.gov/obesity/data/adult.html> retrieved on October 1, 2012.
2. Finkelstein EA, DiBonaventura M, Burgess SM, Hale BC. The costs of obesity in the workplace. *J Occup Environ Med* 2010; 52(10):971-6.
3. Anderson LM, et al, Task Force on Community Preventive Services. The effectiveness of worksite nutrition and physical activity interventions for controlling employee overweight and obesity: a systematic review. *Amer J Prev Med* 2009; 37(4):340-357.
4. Schulte PA, Wagner GR, Blanciforti LA, et al. Work, obesity, and occupational safety and health. *Amer J Public Health* 2007; 97:428-436.
5. Knutson KL Sleep duration and cardiometabolic risk: A review of the epidemiologic evidence. *Best Pract Res Clin Endocrinol Metab* 2010; 24(5): 731-43.
6. Nedeltcheva AV, et al. Insufficient sleep undermines dietary efforts to reduce adiposity. *Ann Intern Med* 2010; 153(7):435-41.
7. Casals-Casas C, Desvergne B. Endocrine disruptors: From endocrine to metabolic disruption. *Annual Rev Physiol* 2011; 73:135-62.
8. Lamontagne AD, Keegel T, et al. Job strain-attributable depression in a sample of working Australians: Assessing the contribution to health inequalities. *BMC Public Health* 2008;8:181-190.
9. Zimmerman U, Kraus T, et al. Epidemiology, implications and mechanisms underlying drug-induced weight gain in psychiatric patients. *J Psychiatric Res* 2003; 37: 193-220.
10. Curtis JR, et al. Population-based assessment of adverse events associated with long-term glucocorticoid use. *Arthritis & Rheumatism (Arthritis Care & Research)* 2006; 55(3): 420–426.
11. Linnan L, Bowling M, Childress J, et al. Results of the 2004 National Worksite Health Promotion Survey. *Amer J Public Health* 2008; 98(8):1503-1509.
12. Champagne N, et al. Obesity/Overweight and the Role of Working Conditions: A Qualitative Participatory Investigation. Univ. Mass. Lowell, Oct 2012. www.uml.edu/research/centers/CPH-NEW.



CPH-NEW
Center for the Promotion of Health
in the New England Workplace

CPH-NEW is a Center for Excellence to Promote a Healthier Workforce of the National Institute for Occupational Safety and Health. CPH-News & Views is a semi-monthly column written by Center researchers on emerging topics related to healthy workplaces. These comments reflect thoughts of the individual researchers and do not represent conclusive research summaries, nor do they necessarily reflect a consensus among all Center personnel. We welcome your responses and discussion. Please send all questions and comments to CPHNEW@uml.edu.