

TOTAL WORKER HEALTH®

INTEGRATED APPROACH TO SAFETY AND OVERALL WELL-BEING

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Centers for Disease Control and Prevention

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NIOSH

Have you heard of NIOSH before?

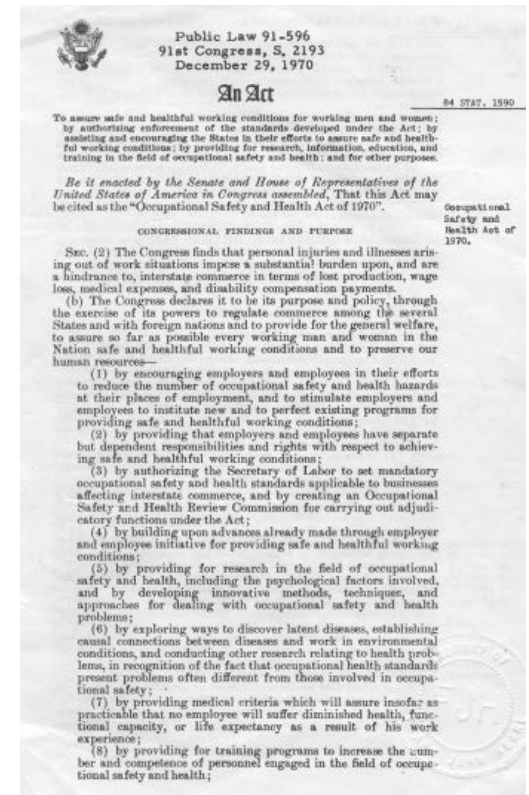
Yes or no?

Do you know what it stands for?

Yes or no?

NIOSH is dedicated to the preserving and enhancing the **Total Health of Workers**

OSHA Act of 1970. SEC. (2) (b) . . . to assure so far as possible every working man and woman in the Nation safe and healthful working conditions and *to preserve our human resources . . .*



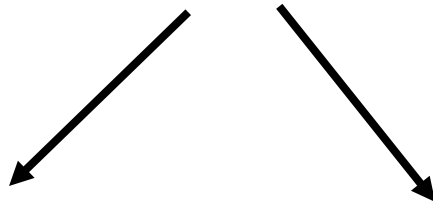
Federal Government & Worker Health

Occupational Safety and Health Standards-Setting & Enforcement

Research and Authoritative Recommendations

**Department of Labor
(DOL)**

**Department of Health and Human Services
(HHS)**



**Centers for Disease Control and Prevention
(CDC)**



MSHA OSHA

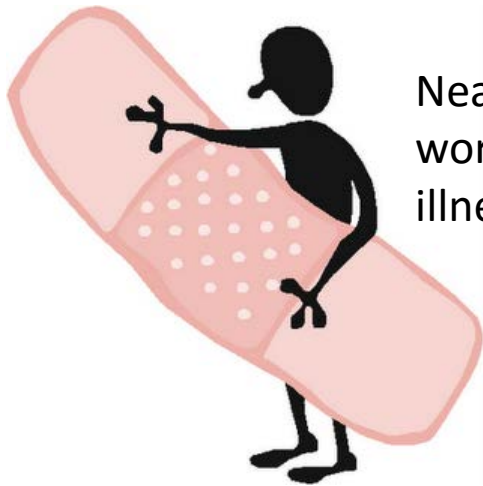


NIOSH

What's Impacting Worker Health Today?

US Burden of Occupational Disease, Injury and Death

Annually, employers reports....



Nearly **4 million** nonfatal workplace injuries and illnesses



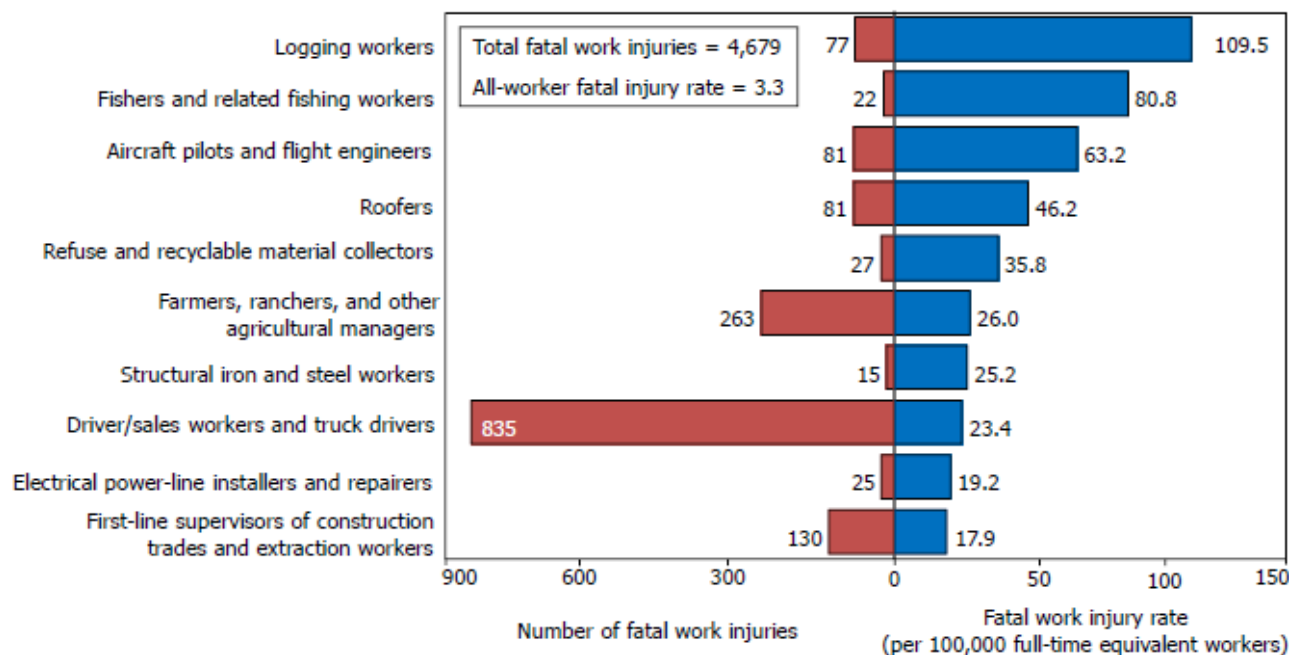
Over **4,500** deaths from work-related injuries and illnesses

\$250,000,000,000

Annual cost of work-related illness, injury, and fatality



Civilian Occupations with High Fatal Work Injury Rates, 2014*

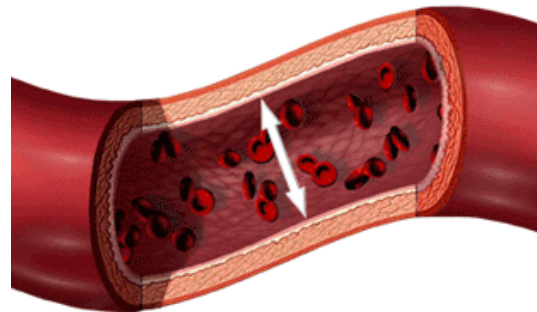
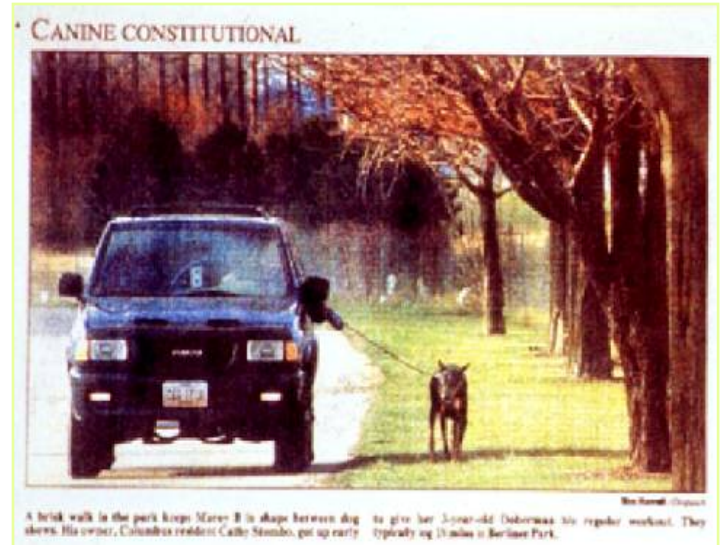


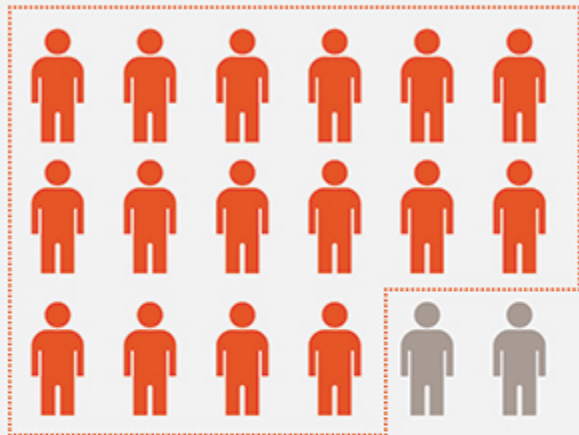
*Data for 2014 are preliminary.

Notes: Fatal injury rates exclude workers under the age of 16 years, volunteers, and resident military. The number of fatal work injuries represents total published fatal injuries before the exclusions. For additional information on the fatal work injury rate methodology, please see <https://www.bls.gov/iif/oshnotice10.htm>.

Source: U.S. Bureau of Labor Statistics, Current Population Survey, Census of Fatal Occupational Injuries, 2015.

Deadly Threats





Nearly

50%

of Americans have one chronic health condition. And, of this group almost half have multiple conditions.⁵



 = 10 Million

Increasing Chronic Health Conditions

- **Cancer¹**
 - 553,000 deaths, 1.3M new cases/yr
 - \$89B in medical costs, \$130B in lost work days & productivity
- **Diabetes¹**
 - >23.6M cases, >200,000 deaths/yr
 - \$116B for medical issues, \$58B for lost work & productivity
- **Cardiovascular Disease¹**
 - 80M cases, >870,000 deaths/yr
 - \$448B a year
- **Tobacco-Related¹**
 - 438,000 deaths
 - \$96B in medical costs, \$97B in direct costs
- **Obesity**
 - Over 68% of Americans ages 20 and over are overweight or obese²
 - Annual US health cost of obesity: \$147 Billion³
- **Aging**
 - Workers ages 55-64 will increase by 36.5% between 2006 and 2016⁴

¹Source: National Center for Chronic Disease Prevention and Control [2008].

²Source: National Center for Health Statistics. Health, United States, 2011.

³Source: Finkelstein EA, Trogon JG, Cohen JW, Dietz W. Annual medical spending attributable to obesity: payer-and service-specific estimates. Health Aff (Millwood). 2009 Sep-Oct;28(5):w822-31.

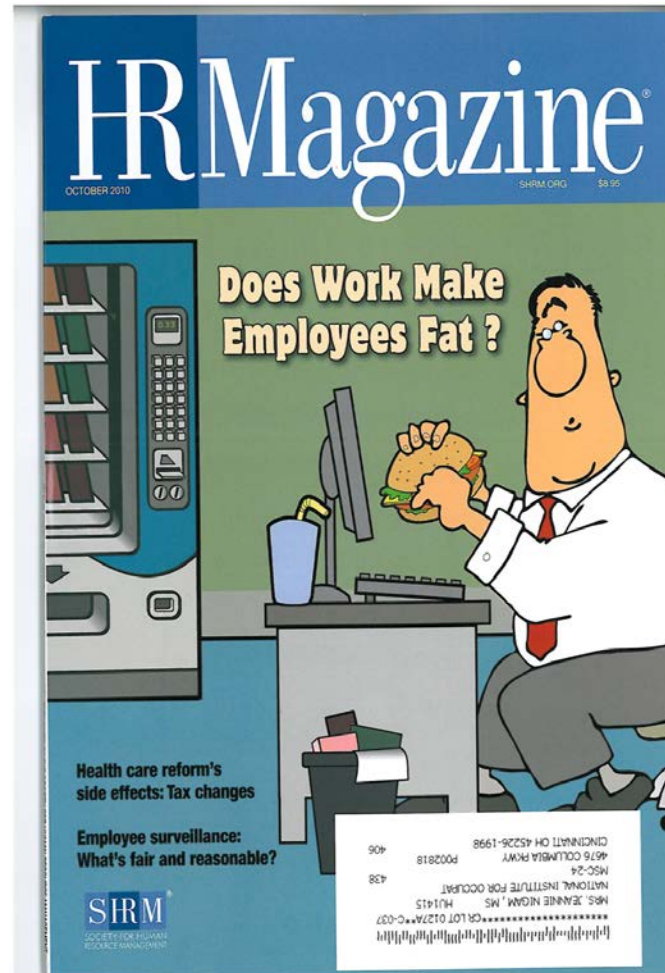
⁴Source: Bureau of Labor Statistics., Department of labor. Spotlight on Statistics: Older Workers. July 2008.

Obesity



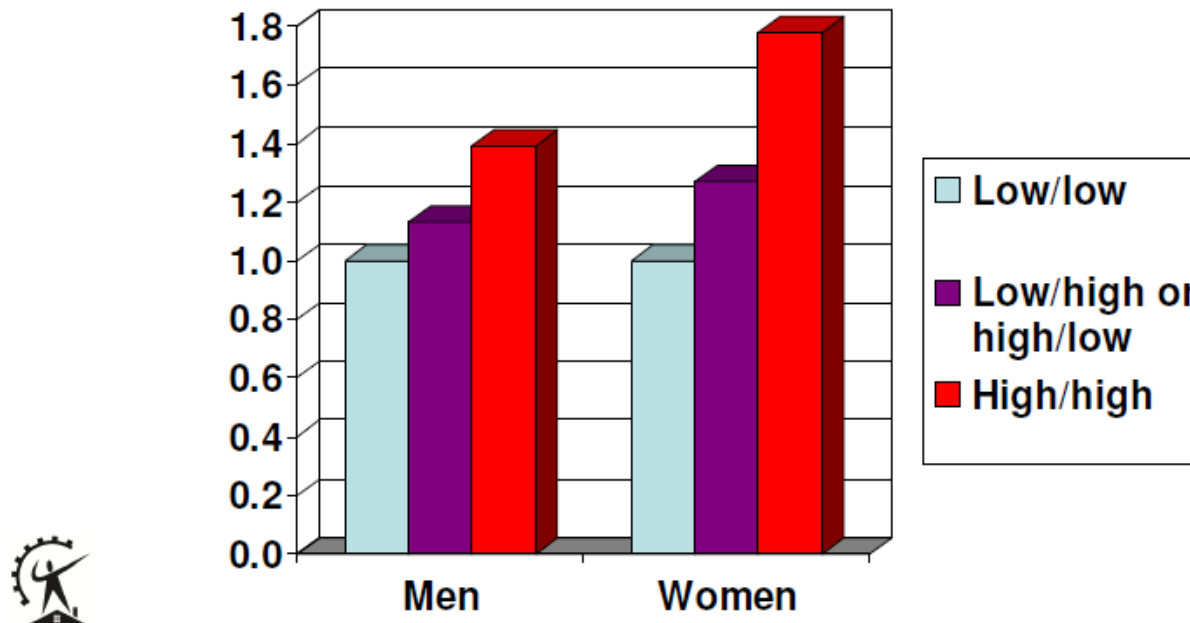
1 in 4 Adult Americans

Does Work Make Employees Fat?



How Can Work Be Improved to Reduce Obesity?

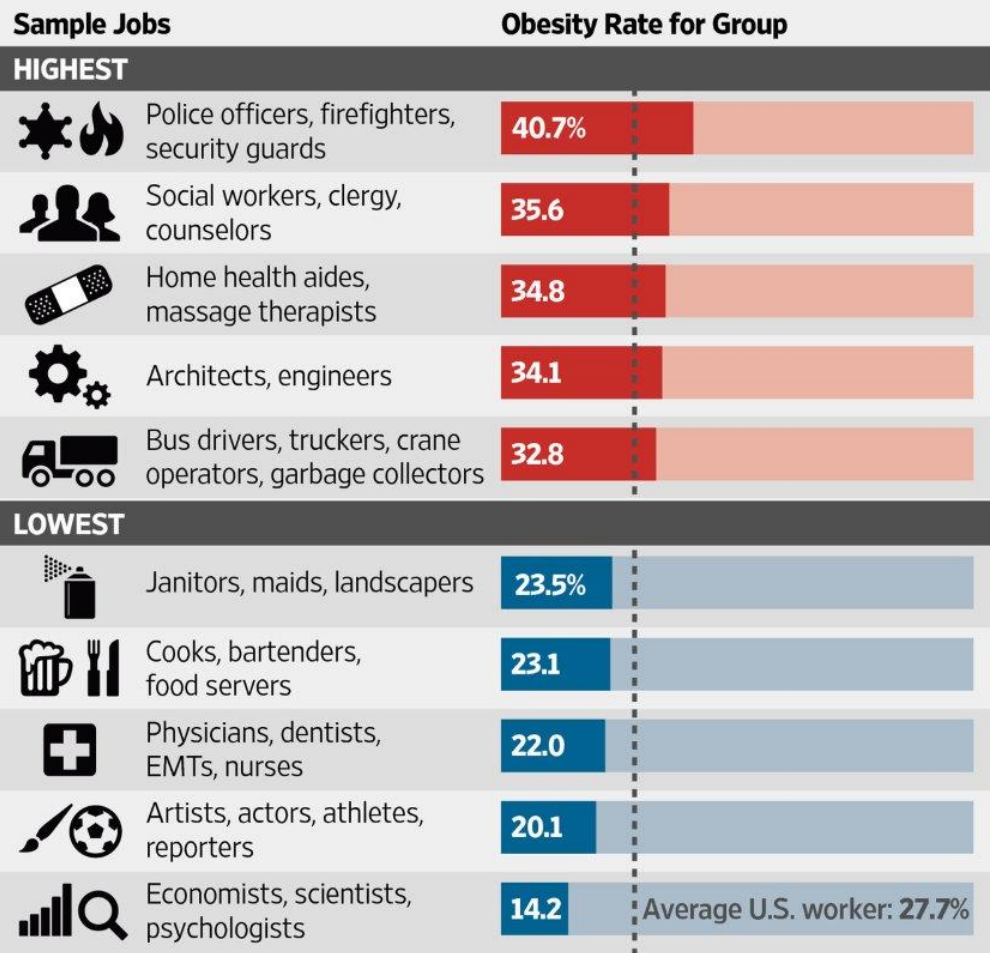
Change in waist circumference by job strain group [Ishizaki et al. 2008]



www.uml.edu/centers/CPH-NEW

Obesity by Occupation

A sampling of U.S. jobs and the prevalence of obesity in that occupational group



Note: Obesity defined as body mass index of 30 or above

The Wall Street Journal

Source: American Journal of Preventive Medicine's 2014 report based on 2010 data



OPEN ACCESS

ORIGINAL ARTICLE

Contribution of health status and prevalent chronic disease to individual risk for workplace injury in the manufacturing environment

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ABSTRACT

Objectives An 'information gap' has been identified regarding the effects of chronic disease on occupational injury risk. We investigated the association of ischaemic heart disease, hypertension, diabetes, depression and asthma with acute occupational injury in a cohort of manufacturing workers from 1 January 1997 through 31 December 2007.

Methods We used administrative data on real-time injury, medical claims, workplace characteristics and demographics to examine this association. We employed a piecewise exponential model within an Andersen–Gill framework with a frailty term at the employee level to account for inclusion of multiple injuries for each employee, random effects at the employee level due to correlation among jobs held by an employee, and experience on the job as a covariate.

Results One-third of employees had at least one of the diseases during the study period. After adjusting for potential confounders, presence of these diseases was associated with increased hazard of injury: heart disease (HR 1.23, 95% CI 1.11 to 1.36), diabetes (HR 1.17, 95% CI 1.08 to 1.27), depression (HR 1.25, 95% CI

What this paper adds

- ▶ Despite an aging population, there is scant literature on the effects of chronic disease on occupational injury risk.
- ▶ Some studies have shown higher risk of injury for those with depression, obesity, diabetes and asthma.
- ▶ We investigated the association of ischaemic heart disease, hypertension, diabetes, depression, asthma and acute occupational injury in a cohort of manufacturing workers for a 10-year period between 1997 and 2007.
- ▶ After adjusting for potential confounders, presence of these diseases was significantly associated with increased hazard of injury: heart disease (HR 1.23), diabetes (HR 1.17), depression (HR 1.25) and asthma (HR 1.14).
- ▶ Our results suggest that chronic heart disease, diabetes and depression confer an increased risk for acute occupational injury. Employees may benefit from strategies to reduce chronic

Workforce Unwellness

Unwellness at work is incredibly costly!



\$1,100b

Costs of chronic disease



\$250b

Costs of work-related injuries & illnesses



\$300b

Costs of work-related stress



\$550b

Costs of disengagement at work

\$2.2 trillion annual loss in the United States (12% of GDP)

Source: Milken Institute, UC-Davis, EU-OSHA, Gallup





Workers' risk of disease may be increased by exposure to both occupational hazards and individual risk-related behaviors.¹⁴

The Total Worker Health[®] Solution

What is Total Worker Health[®] ?

Policies, programs, & practices that integrate **protection from work-related safety & health hazards** with **promotion of injury & illness prevention efforts** to advance worker well-being

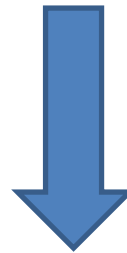


Total Worker Health

Keep Workers Safe

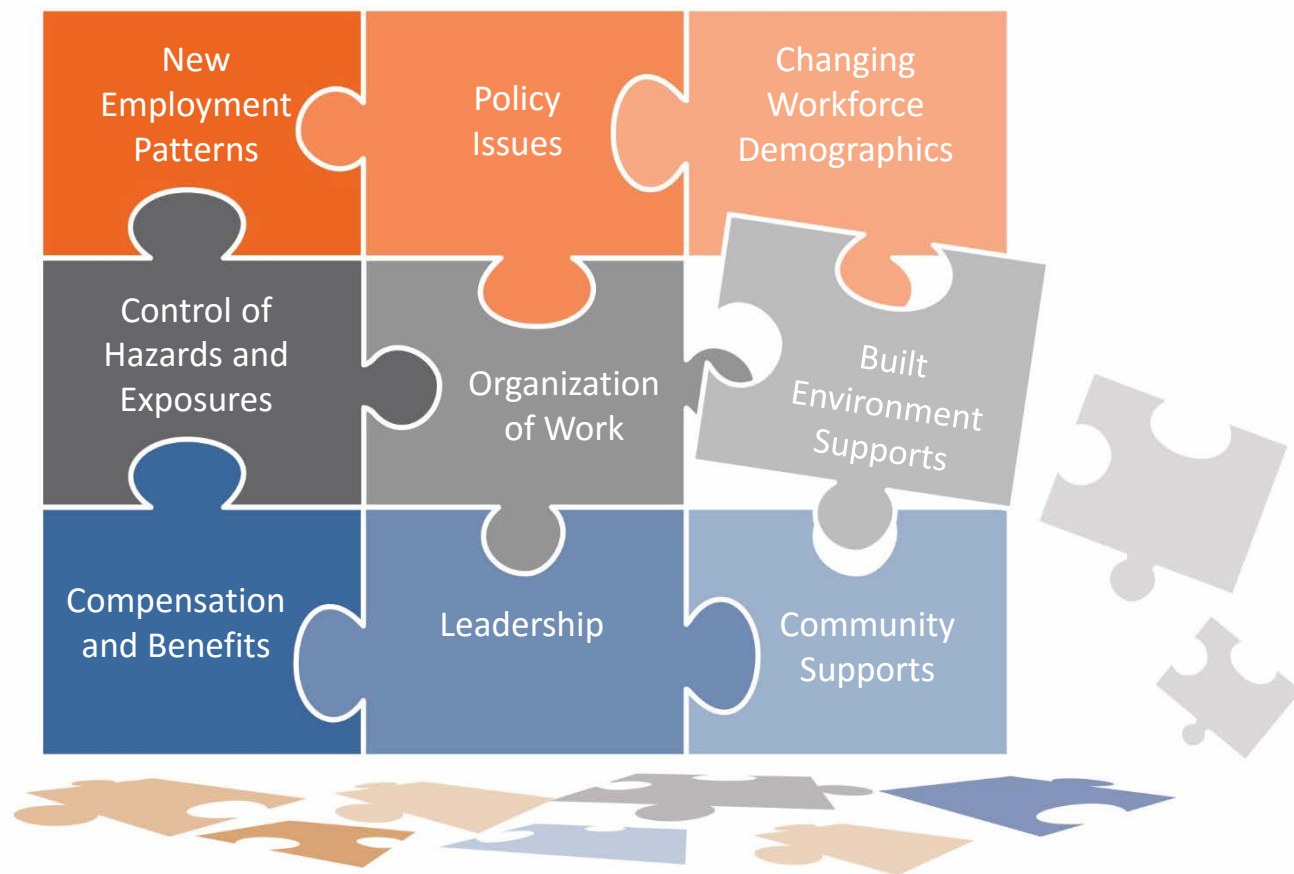


Invest More in Worker Health



Create Worker **Wellbeing**







Total Worker Health[®] - What It **Is** and Is **Not**

- TWH is not a “typical workplace wellness program”
- TWH is not an intervention that merely uses the workplace as a venue for health promotion
- TWH is not about healthcare/health insurance cost-shifting based on underlying health conditions or health habits
- TWH examines how the *work itself* can influence health outcomes
- TWH embraces voluntary, participatory health interventions
- TWH programs protect workers’ rights and privacy and do not discriminate based upon health conditions

Individually-Focused Behavior Change Interventions **Not** Enough

“It is unreasonable to expect people to change their behavior when the social, cultural and physical environments around them fully conspire against them....”



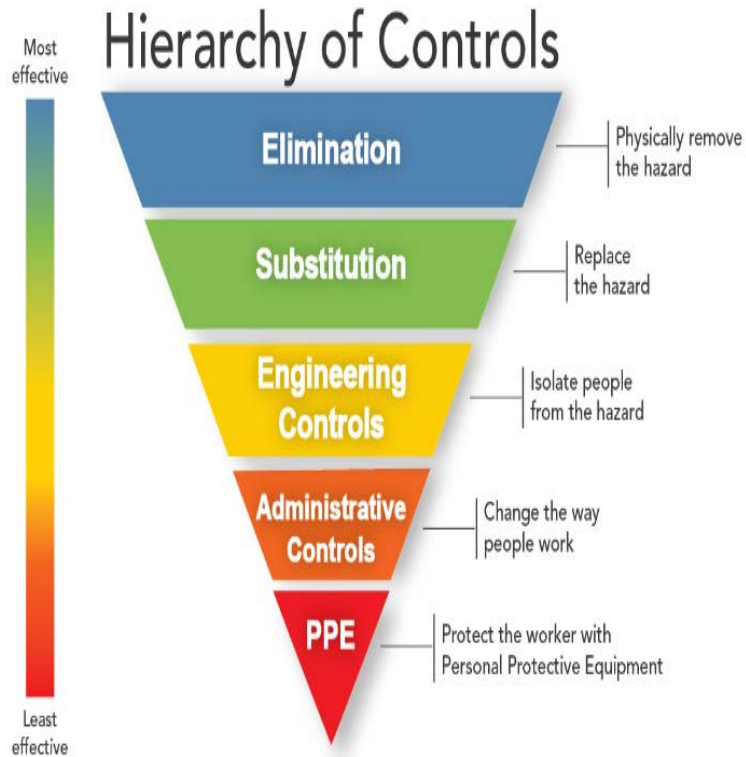
Policies, programs, & practices that integrate **protection** from work-related **safety & health** hazards with promotion of injury & illness prevention efforts to advance worker well-being



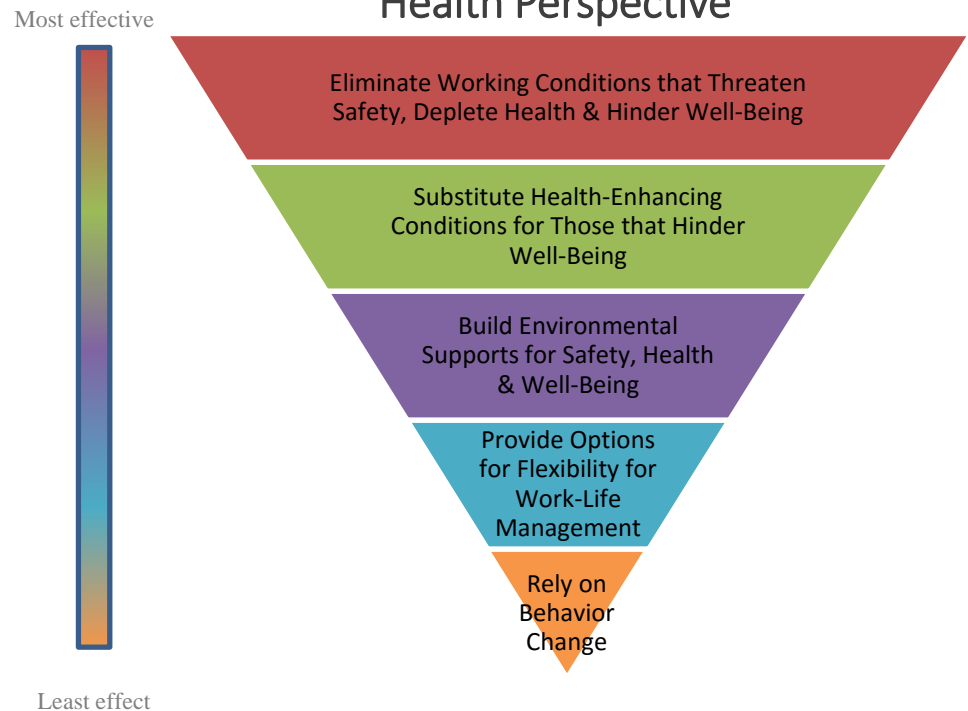
Policies, programs, & practices that integrate protection from work-related safety & health hazards with **promotion** of injury & illness prevention efforts to advance worker **well-being**



Keeping Workers Safe is Fundamental to Total Worker Health



Hierarchy of Controls, tailored to a Total Worker Health Perspective



Protecting Workers Is the Cornerstone of Total Worker Health®

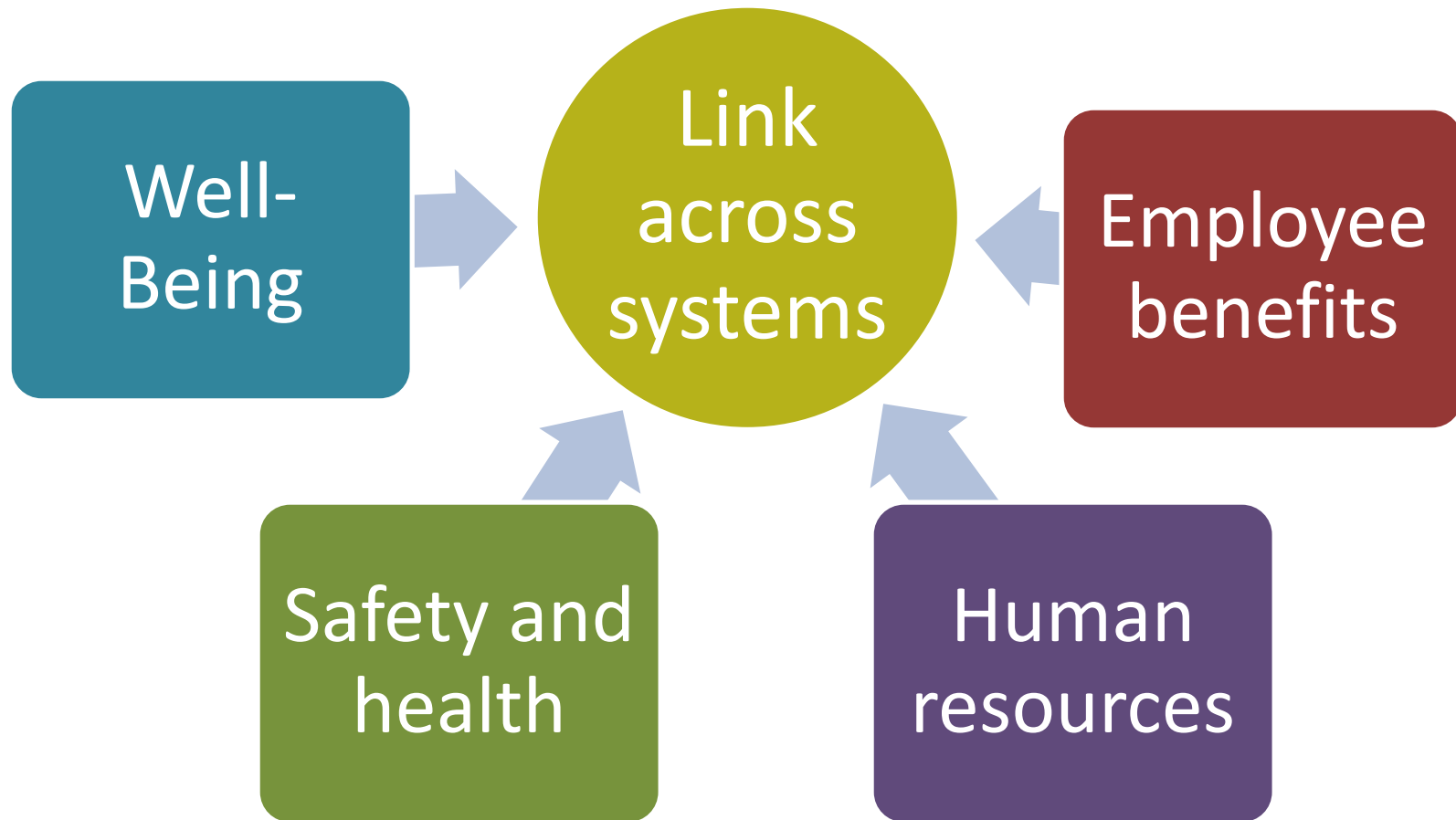


What do you *mean* by an Integrated Approach?

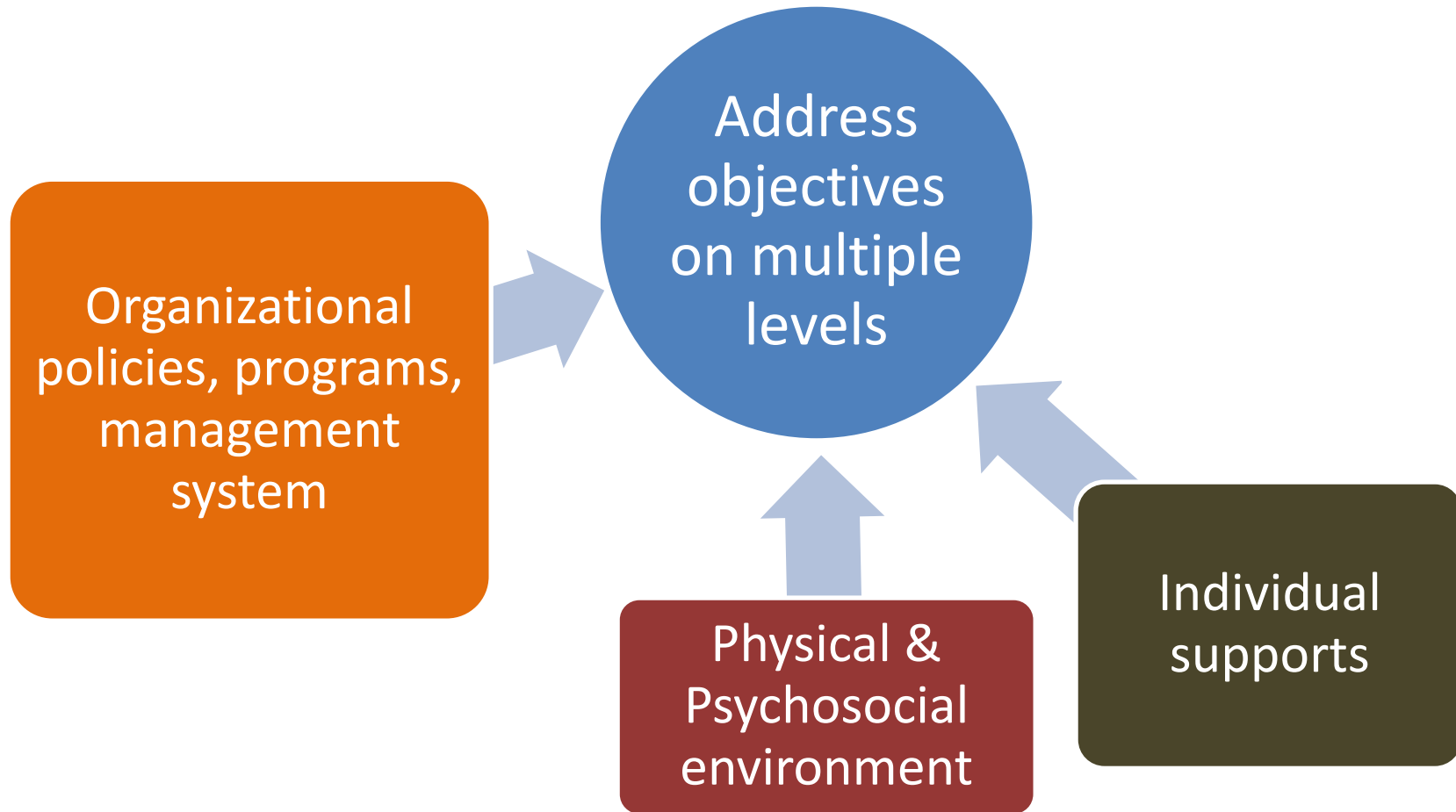
COLLABORATIVE EFFORT

- Goal: align all initiatives focused on worker health to reduce duplicated efforts,
 - Optimize budgets
 - Utilize Limited Resources
 - Amplify the impact of all programs involved
- Bringing all of these groups together is the best way to systematically;
 - Gain insight from all interested factions and
 - Assure that the program is relevant

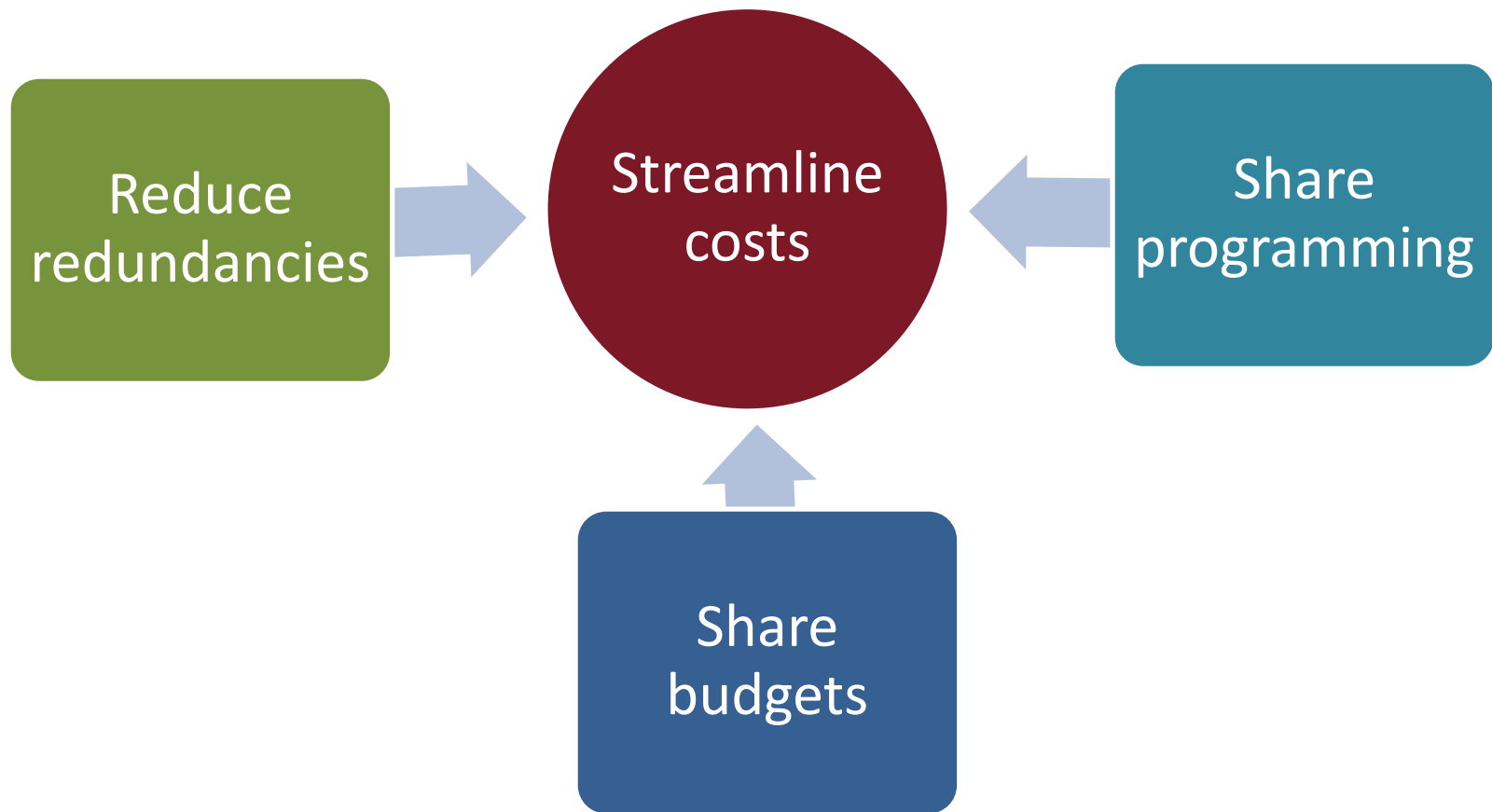
An Integrated Approach



Designing an integrated approach



Benefits of an integrated approach



THE COMMITTEE

Director of Occupational Health and Safety (OHS)

Director of Benefits & Wellness

OHS Manager

Health & Wellness Manager

OHS Committee Leader

Employee Assistance Program

Workman's Compensation Representative

Human Resource Representative

Organizational Development Representative

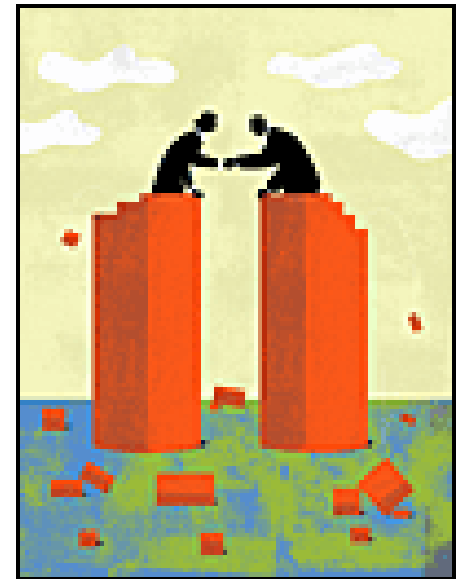
Risk Management



Why Implement an Integrated Approach?

Interdependent Effects

- Workers may perceive changes in health behaviors as futile in the face of significant occupational exposures.
- Management efforts to create a healthy work environment may
 - Increase workers' motivations to modify personal health behaviors
 - Foster trust that may support workers' receptivity to messages.



Why Implement an Integrated Approach?

Increase effectiveness of existing programs

Worksite smoking cessation interventions are more than twice as effective when integrated with occupational safety and health.

Among blue-collar hourly workers who received an integrated OSH/health promotion program, smoking quit rates more than doubled (11.8% vs 5.9%), compared to those who only received health promotion.

Potential Impact

- Reduction in workplace injuries
- Safer, Healthier, and productive employees
- Improved Worker Job Satisfaction
- Enhanced Organizational Culture (Trust, Safety, Health)
- Happier, less stressful, and more prosperous business environment
- Reduction in Work-related Stress
- Improved Health Decisions
- Reduction in health care costs
- Community gains

Issues Relevant to Advancing Worker Well-being Through Total Worker Health[®]

Control of Hazards and Exposures

- Chemicals
- Physical Agents
- Biological Agents
- Psychosocial Factors
- Human Factors
- Risk Assessment and Risk Management

Organization of Work

- Fatigue and Stress Prevention
- Work Intensification Prevention
- Safe Staffing
- Overtime Management
- Healthier Shift Work
- Reduction of Risks from Long Work Hours
- Flexible Work Arrangements
- Adequate Meal and Rest Breaks

Built Environment Supports

- Healthy Air Quality
- Access to Healthy, Affordable Food Options
- Safe and Clean Restroom Facilities
- Safe, Clean and Equipped Eating Facilities
- Safe Access to the Workplace
- Environments Designed to Accommodate Worker Diversity

Leadership

- Shared Commitment to Safety, Health, and Well-Being
- Supportive Managers, Supervisors, and Executives
- Responsible Business Decision-Making
- Meaningful Work and Engagement
- Worker Recognition and Respect

Compensation and Benefits

- Adequate Wages and Prevention of Wage Theft
- Equitable Performance Appraisals and Promotion
- Work-Life Programs
- Paid Time Off (Sick, Vacation, Caregiving)
- Disability Insurance (Short- & Long-Term)
- Workers' Compensation Benefits
- Affordable, Comprehensive Healthcare and Life Insurance
- Prevention of Cost Shifting between Payers (Workers' Compensation, Health Insurance)
- Retirement Planning and Benefits
- Chronic Disease Prevention and Disease Management
- Access to Confidential, Quality Healthcare Services
- Career and Skills Development

Community Supports

- Healthy Community Design
- Safe, Healthy and Affordable Housing Options
- Safe and Clean Environment (Air and Water Quality, Noise Levels, Tobacco-Free Policies)
- Access to Safe Green Spaces and Non-Motorized Pathways
- Access to Affordable, Quality Healthcare and Well-Being Resources

Changing Workforce Demographics

- Multigenerational and Diverse Workforce
- Aging Workforce and Older Workers
- Vulnerable Worker Populations
- Workers with Disabilities
- Occupational Health Disparities
- Increasing Number of Small Employers
- Global and Multinational Workforce

Policy Issues

- Health Information Privacy
- Reasonable Accommodations
- Return-to-Work
- Equal Employment Opportunity
- Family and Medical Leave
- Elimination of Bullying, Violence, Harassment, and Discrimination
- Prevention of Stressful Job Monitoring Practices
- Worker-Centered Organizational Policies
- Promoting Productive Aging

New Employment Patterns

- Contracting and Subcontracting
- Precarious and Contingent Employment
- Multi-Employer Worksites
- Organizational Restructuring, Downsizing and Mergers
- Financial and Job Security

EXAMPLES OF INTEGRATED APPROACHES

Example of Integrated Approach Musculoskeletal Disease

Reorganizing
work



Ergonomic
consultations



Arthritis self-
management
strategies



BENEFITS OF INTEGRATION

Increased Program Participation and Effectiveness



Smoking quit rates:

11.8%

Integrated interventions



Health promotion only

5.9%

GUIDELINES AND RESOURCES FOR DEVELOPING A TWH APPROACH

<http://www.cdc.gov/niosh/twh/totalhealth.html>

The National Institute for Occupational Safety and Health (NIOSH)

Total Worker Health

What is Total Worker Health?

Frequently Asked Questions

Research Program

Tools: Let's Get Started! +

Publications & Reports +

Partnerships +

Total Worker Health in Action! eNewsletter +

TWH Events +


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NIOSH > Total Worker Health

TOTAL WORKER HEALTH



What is Total Worker Health®?

Total Worker Health® is defined as policies, programs, and practices that integrate protection from work-related safety and health hazards with promotion of injury and illness prevention efforts to advance worker well-being.

Providing National and World Leadership
to Prevent Workplace Illnesses and Injuries



On this Page

- Program Description
- Keeping Workers Safe
- Issues Relevant to Advancing Worker Well-being Through Total Worker Health
- Examples of Total Worker Health



Simple Steps to Get Started

<http://www.cdc.gov/niosh/twh/steps.html>

1. NIOSH Essential Elements of Effective Workplace Programs and Policies for Improving Worker Health and Wellbeing
2. Ideas You Can Implement Right Now to Integrate Health Protection and Promotion of Worker Well-being
3. Worksheet to Help You Get Started on Program Design, Implementation, and Evaluation



Assessment Tools

<http://www.cdc.gov/niosh/twh/tools.html>

1. Integration of Health Protection and Health Promotion: Rationale, Indicators, and Metrics (Sorensen et al, 2013)
2. CDC Worksite Health ScoreCard (HSC)
3. NIOSH Organization of Work Measurement Tools for Research and Practice
4. NIOSH Quality of Worklife Questionnaire
5. Occupational Safety and Health Administration (OSHA) Form 33
6. American College of Occupational and Environmental Medicine's Corporate Health Achievement Award
7. CDC Workplace Health Assessment

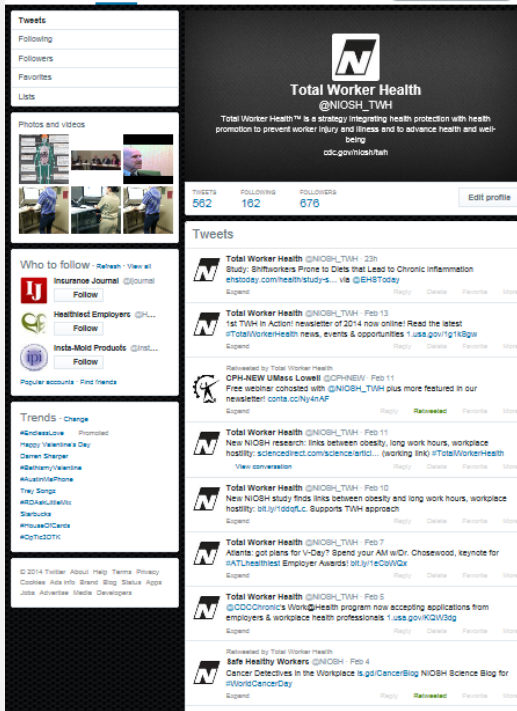
Guidelines for Integrated Approaches

<http://www.cdc.gov/niosh/twh/tools.html>

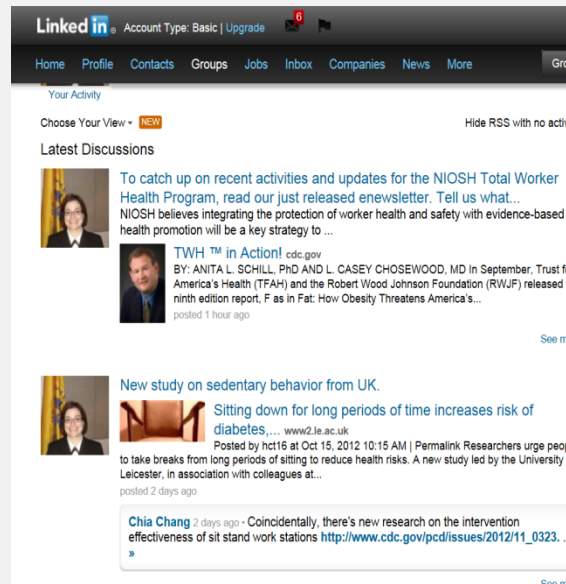
- 1. The Whole Worker: Guidelines for Integrating Occupational health and Safety with Workplace Wellness Programs**, State of California Commission on Health and Safety and Workers' Compensation (CHSWC); 2010
- 2. Healthy Workplace Participatory Program** by Center for Promotion and Health in the New England Workplace (CPH-NEW); 2013
- 3. SafeWell Practice Guidelines: An Integrated Approach to Worker Health Version 2.0** by the Harvard School of Public Health, Center for Work, Health, and Well-Being; 2012

Ways to Connect with Total Worker Health®

Twitter (@NIOSH_TWH)



LinkedIn Group (Search “NIOSH Total Worker Health”)



TWH in Action! e-Newsletter



<http://www.cdc.gov/niosh/TWH/newsletter/>

Topic-specific resources of interest

NIOSH Healthy Aging Topic Page:

<http://www.cdc.gov/niosh/topics/healthyagingatwork/>

CDC Healthy Hospital Toolkit:

<http://www.cdc.gov/obesity/healthy-hospital-environment-toolkit/index.html>

NIOSH Work Schedule Topic Page:

www.cdc.gov/niosh/topics/workschedules/

<http://www.cdc.gov/niosh/twh/webinar.html>



Webinar Series

Recognizing the complex, often interlinked hazards affecting the health, safety, and well-being of today's workforce, the NIOSH Total Worker Health® program is excited to present a free webinar series aimed at providing the latest research and case studies for protecting the safety and health of workers everywhere. All 90-minute webinars are recorded and are available for on-demand viewing.

Webinar Series Learning Objectives

- Describe recent trends in demographics, employment conditions, worker safety, injury, and illness as they relate to the health and well-being of workers.
- Describe the relationship between at least one health condition and at least one condition of work.
- Discuss the latest findings supporting rationale for implementing a Total Worker Health® approach.
- List one potential opportunity for integration between health protection and policies, programs, and practices that promote health and advance worker safety, health and well-being.
- Develop workplace programs and interventions that integrate elements of occupational safety and health protection with policies, programs, and practices that promote health and advance worker safety, health and well-being.
- Identify sources of information on prevention of adverse worker health and safety outcomes and the promotion of Total Worker Health®.

To evaluate this educational activity, receive a certificate, or to print-out an on-going transcript of all of your TCEOnline CE activities, please visit: www.cdc.gov/TCEOnline.

Next webinar: September 2016

Slated topic: Productive Aging: Strategies for Developing Age-Friendly Workplaces



Contact

Email: TWH@cdc.gov

NIOSH Total Worker Health[®]
website:

[http://www.cdc.gov/niosh/
twh](http://www.cdc.gov/niosh/twh)

 Centers for Disease Control and Prevention
CDC 24/7: Saving Lives, Protecting People™

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SEARCH

CDC A-Z INDEX ▾

The National Institute for Occupational Safety and Health (NIOSH)

Providing National and World Leadership
to Prevent Workplace Illnesses and Injuries 



What is Total Worker Health[®]?

Total Worker Health[®] is defined as policies, programs, and practices that integrate protection from work-related safety and health hazards with promotion of injury and illness prevention efforts to advance worker well-being.

The Total Worker Health (TWH) approach advocates for a holistic understanding of the factors that contribute to worker well-being. Scientific evidence now supports what many safety and health professionals, as well as workers themselves, have long suspected—that risk factors in the workplace can contribute to health problems previously considered unrelated to work.