HEALTHIER WORKPLACES | A HEALTHIER WORLD

Ergonomics Talking Points for the OEHS Professional

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What is it?

Ergonomics adopts a systems approach to designing (or re-designing) effective work, and that requires consideration of relevant cognitive, physical, and organizational factors that can affect human work performance, health, and well-being. As such, it is an essential part of a *Total Worker Health*® approach. In a nutshell, its contributions to *Total Worker Health* (TWH) research are mainly the following:

- Prevention and control of exposure to ergonomic hazards that can lead to musculoskeletal injuries, such as postural stress, repetition, vibration, static work and excessive force.
- Workplace (re)design to reduce stress, sedentarism, distraction and discomfort, as well as to enhance worker well-being.
- Workplace (re)design to accommodate individuals with disabilities or suffering from chronic pain or illnesses.

Why should you care?

There are several reasons the OEHS professional should care about applying ergonomics to TWH interventions:

- Musculoskeletal injuries remain an unresolved problem that can lead to high turnover rates, absenteeism, presenteeism, disability, substance addiction, and mental health illnesses.
- Chronic disease, comorbidity, and stress-related illnesses are rapidly increasing in the working-age population. Stress is a known cause of both mental health disorders and cardiovascular diseases.
- Well-designed workplaces can impact human behavior in terms of safety, productivity, quality of work, job satisfaction, motivation, engagement, and comfort.
- There is substantial evidence now showing the health risks associated with sedentary work and modern technology has increased the number of jobs that are sedentary in nature.

- Maintaining workers' health and well-being is on the top of the agenda of many organizations aiming for sustaining their businesses and attracting/retaining employees.

What can you do about it?

Existing ergonomic methods and guidelines for designing or re-designing work/workplace can be utilized to reduce the risk of musculoskeletal injuries. However, practitioners should ensure ergonomic programs are not offered in silo and they should eliminate hazards that can impact the physical and mental health of workers. The TWH approach requires attention to the entire sociotechnical system, which comprises of safety culture, performance, engagement, organization structure, and social and team dynamics at work. There are several things OEHS professionals can do to support and be more attentive to this holistic application of ergonomics. Below are some tips that can help you to get started:

1. Beyond addressing traditional ergonomic hazards to reduce musculoskeletal injuries, work performance and well-being can suffer if the environmental conditions are suboptimal, thus, consider the following environmental hazards:
    - Lighting: There are many known health benefits of natural light exposure, shades for high sun hours, and lighting settings to minimize disruptions in the body's natural circadian rhythm. Additionally, providing the right amount of light for the type of tasks performed can minimize eye strain and postural stress.
    - Temperature: Workplaces that are too cold, hot, or humid can lead to mental and physical fatigue, and it can affect concentration on tasks. More specifically, our dexterity and cognitive abilities can be substantially impaired by exposure to very cold conditions, while our energy levels are affected by hot and humid conditions.
    - Space layout: Crowded and poorly ventilated indoor spaces can accumulate carbon dioxide, leading to dizziness, headaches, and mental fatigue. Poor air quality can also lead to increased risks of respiratory infections and concentration.
    - Noise: Noisy environment can be distracting, uncomfortable, and exacerbate the level of stress. Workers are more productive and able to concentrate on their tasks when noise distractions are minimized.
2. Design to improve physical health by offering height-adjustable worksurfaces, promoting changing posture and movement during the work shift, developing walking routes and encouraging walking meetings, etc.
3. When well-being is "built-in" to the design of space, it can be very effective. Observe if the existing ergonomic program is a silo and reactive approach to injury prevention. If it is, try to revamp it by integrating more proactive strategies that support not only musculoskeletal health but also comfort, engagement, and well-being at work. Some examples: ensure workers have easy access to plenty of natural light and create a

variety of social interaction spaces with direct input from workers on workspace size, type, furnishings, and technology that fit their immediate work needs.
4. Help organizations develop policies and activities that allow workers to: 1) identify work organization and workplace design issues that are affecting their health, safety and well-being; and 2) collaborate across departments to eliminate those issues through well-established ergonomic design guidelines and prevention through design principles.
5. Account for human variability and workforce diversity when evaluating design issues. When in doubt, utilize work system design experts.
6. Be a TWH advocate in your organization and utilize the TWH Hierarchy of Controls to prioritize elimination of working conditions that threaten safety, health, and well-being.

Want to know more?

- AIHA Ergonomic Assessment Toolkit *(Revised in 2023)*
- ILO/IEA Principles and Guidelines for Human Factors/Ergonomics (HFE) Design and Management of Work Systems (2021)
- ASSP Case Study: Integrating Human Factors Into a Prevention Through Design Approach
- Ergonomics Process in Five Steps from Washington State Labor & Industries

Leadership/Worker/Community for Sharing by the OEHS Professional

What is it?

There is an emerging opportunity to effectively use workplace design to protect health and promote the well-being of all workers. Ergonomic solutions can be part of an integrated TWH effort to design (or re-design) work and the work environment for this particular purpose. In a nutshell, ergonomics for TWH can target the following:

- Prevention of musculoskeletal injuries by mitigating hazards such as postural stress, repetition, vibration, static work, and excessive force.
- Workplace (re)design to reduce stress, sedentarism, distraction, and discomfort, as well as to enhance well-being.

- Workplace (re)design to accommodate individuals with disabilities or suffering from chronic conditions.

Why should you care?

- Musculoskeletal injuries remain an unresolved problem and affect many workplaces.
- Chronic disease, comorbidity, and stress-related illnesses are rapidly increasing in the working-age population and have huge cost implications for employers, workers, and society.
- Sedentary jobs are common in the modern workplace and they lead to an unhealthy workforce.
- Applying ergonomic workplace design principles leads to a reduction of the burden of injury and disability on all stakeholders, increases the number of people who can perform the tasks, productivity, job satisfaction, safety, and the quality of the work.

What can you do about it?

- Support proactive preventive strategies designed to not only reduce musculoskeletal injuries but also help workers to stay healthy and productive. These strategies should be proven effective and aligned with existing health and safety management systems.
- Incorporate well-being concepts into workplace design. Some examples include ensuring workstations receive plenty of natural light are free from noise and have proper lighting; and creating open plan areas to address people's affinity for wide open spaces.
- Consider the workspace design available to improve physical and mental health and reduce stress by, for instance, promoting movement by developing walking routes, encouraging walking meetings, offering various types of group engagement activities, and promoting changing postures and movement if the work is sedentary.
- Refer to evidence-informed practices in design ergonomics or consult with experts in design improvements for health, safety, and well-being.
- Remember that it is not "one size fits all," and solutions need to be tailored to each workplace and group needs.
- Consult with workers in any workplace design and use of technology decisions, as they are the main users and know best what makes them healthy and feel safe.