Ergonomics: Training the Work Force

Training is a critical element of a successful occupational ergonomics program. Learning opportunities provide people with the means necessary to complete the steps of the ergonomics improvement process. These key steps include identifying risk, reducing risk, verifying risk reduction, managing injuries, and maintaining program sustainability. Training is critical, not to be taken lightly, and it can be one of the biggest investments a company makes in its ergonomic agenda. Therefore, it must be well planned, focused, and coordinated. This article describes critical elements for success with the training portion of your ergonomics process, the reason for training, whom to train and in what order, and the content of each level of training.

Reason for Training

The sole purpose of training in ergonomics (or safety, or any other workplace program) is to provide people with the skills, knowledge, abilities, and tools to accomplish their designated responsibilities. These people form the support infrastructure for your ergonomics process. The responsibilities vary with each different role in the process.

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<tr>
<th>Role</th>
<th>Responsibilities</th>
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<tr>
<td>Management/Labor Sponsor</td>
<td>Ensure implementation and success of the ergonomics process.</td>
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<tr>
<td>Ergonomics Process Manager</td>
<td>Coordinate all aspects of the ergonomics process.</td>
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<td>Ergonomics Team Members</td>
<td>Assess ergonomic risk factors, facilitate improvements to reduce risk, and communicate within a designated area of the operation.</td>
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<tr>
<td>Engineering and Maintenance</td>
<td>Specify, design, install, and maintain workstations, equipment, and tools that pose the lowest possible ergonomic risk.</td>
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<tr>
<td>Managers and Supervisors</td>
<td>Supervise employees and manage processes. Managers and supervisors are accountable for the safety/ergonomic conditions of the workplace and practices.</td>
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<tr>
<td>Employees</td>
<td>Follow established work and safety procedures, adjust workplace to reduce risk, and report symptoms of potential injuries.</td>
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<tr>
<td>Medical/Workers’ Compensation</td>
<td>Manage or administer medical care, workers’ compensation, and injury management of WMSDs.</td>
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Before you begin training, plan what you want to accomplish. This includes defining the ergonomic improvement process and process measures for your site or organization, and establishing the key roles and responsibilities of people supporting the process. Use this information to determine the need for training, the learning objectives, and training content.

**Training Sequence**

While all groups play an important role in the total process, the order of training people in key roles has a major impact on the success and sustainability of the ergonomics process. Do not begin by providing awareness training for employees. Although this is simple and fun to do, a program based solely on awareness will not survive. Before you paint a wall, you must prepare it to allow the paint to stick, provide good coverage, and last over time. Before you train employees, you must prepare the support infrastructure (key roles) with skills training. The recommended sequence is as follows:

1. Start by educating **senior managers** to obtain their sponsorship, guide them into leadership roles, and establish direction and goals for the ergonomics process.

2. Train the person or persons responsible for managing the ergonomics process. The role of the **ergonomics process manager** is to coordinate and deploy all elements of the process. To accomplish this, he or she must understand the site’s or organization’s goals and expectations for the ergonomics process, identify supporting roles, and develop plans for implementation and communication.

3. Develop the skills, abilities, and confidence of ergonomics team members, engineering and maintenance personnel, and medical/workers' compensation resources. Effective skills training will establish a small team of resident experts who can address tough ergonomic challenges escalated by managers and supervisors.
   - **Ergonomics team members** typically have responsibility for assessing ergonomic risks and leading improvement efforts. To facilitate these tasks, they must be provided with easy-to-use tools and methods for risk assessment, risk prioritization, root cause analysis, and a process for implementing changes.
   - **Engineering and maintenance personnel** have a critical role in designing and installing workstations, work environments, and tools that minimize exposure to ergonomic risk factors. They require tools, methods, and resources to design equipment within the capabilities of the working population. As a result, they will be able to assist ergonomics teams in improving the existing workplace (reactive), and ensure that all future equipment and tools do not pose ergonomic risk (proactive).
   - **Workers' compensation managers and medical personnel** must be prepared to deal with and manage work-related musculoskeletal disorders (WMSDs) when they do occur. Training in current practices will enable them to manage injuries and reduce the time and cost of returning injured employees to work.

4. Provide **managers and supervisors** with awareness training and coaching to affect work practices and behaviors, and to improve workplace conditions. In their
supervisory roles, these individuals are best prepared to assist with the implementation of improvements identified by ergonomics team members, and engineering and maintenance personnel. In addition, they are the most influential people to affect employee safe work practices.

5. Provide employees with awareness training to prepare and empower them to identify potential ergonomic issues in their workplace, and to adjust the workplace to control the issues or escalate issues to their supervisors for assistance.

Organizations that establish clearly defined roles and responsibilities, and provide training to ensure capability to meet these responsibilities, create a strong internal support infrastructure. The infrastructure ensures that employees receive support when they take responsibility for improving their workplace and practices.

Training Content

Training class structure and content should focus on ensuring that people are successful in performing their roles supporting the ergonomics process. This means that different roles require different topics and learning objectives; the course outline lies in the defined responsibilities for each role. Training should provide each person with the knowledge, tools, ability, and confidence to meet all of the responsibilities.

For example, to meet the responsibilities described above for employees, awareness training should include:

- Overview of the site ergonomic improvement goals, process, and support infrastructure
- Employee responsibilities in the site ergonomics process
- Method (and expectation) to identify ergonomic issues in their workstations and tasks
- Specific, easy-to-apply work practices and tools/devices to reduce ergonomic risk at their workstations and tasks
- Expectation to adjust or change a workplace or task to reduce risk
- How to escalate issues for which they cannot reduce risk
- Process (and expectation) to report symptoms of WMSDs

For each person or role defined in your ergonomics process, determine their responsibilities. The responsibilities become the basis for the learning objectives of each training class.

Interactive, hands-on exercises are the most effective method for adult learning. Hands-on applications using familiar examples and case studies are critical for developing skills needed to perform ergonomic assessments, implement engineering controls or behavioral changes, and investigate WMSD incidents—and they keep participants mentally engaged in the training. Presenting theory and concepts is fascinating for some people, but learning opportunities that allow participants to practice new skills will improve retention, comfort, and confidence. These three characteristics help ensure that workplace changes (ergonomic improvements) occur following each training session.
Integrated responsibilities will determine the cascading learning objectives for each role. By planning these objectives before class content, you will ensure that all roles in the support infrastructure are clearly defined, avoid gaps and duplication of coverage, and ensure the use of common language and tools.

Bear in mind that training is an activity that supports the implementation and ongoing sustainability of an effective ergonomics process, the critical elements of which are:

- Identifying risk
- Reducing risk
- Verifying risk reduction
- Managing injuries
- Maintaining program sustainability

The Critical Success Factors

In summary, the critical success factors for effective, efficient, and sustainable ergonomics training are as follows:

- Base the need for and content of training on the performance expected from the participants. Well defined roles and responsibilities of the support infrastructure are your blueprint for ergonomics training.
- Prepare the wall. The training sequence begins at the top of the support infrastructure and ends with employee awareness training.
- Hold people accountable for performing the activities and achieving results using the skills and methods provided in training.

About the Author

Walt Rostykus, CPE, CIH, CSP is a vice president and ergonomics engineer for Humantech, Inc. Since 1979, Humantech has assisted companies throughout North America with successful ergonomics initiatives in a variety of workplace settings including production and assembly, offices, and laboratories. Through a clear focus on low-cost, high-impact workplace improvements that produce quantifiable savings, Humantech clients benefit from health and safety improvements and substantial business results. For additional information visit Humantech’s web site, www.humantech.com.