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ERGONOMICS – WHAT IS IT?

...AND HOW DOES IT AFFECT YOU, THE SUPERVISOR?

By SeaBright Insurance Loss Control

Ergonomics is the study of the relationship between human beings and their physical work environment. This emerging science is providing insight onto how a poorly designed fit between an individual and his/her work space can result in long-term disabling effects. The evidence clearly shows that while musculoskeletal disorders account for few work related deaths, they do account for a significant amount of human suffering, productivity loss, and an economic burden on compensation systems. These types of disorders cause health problems affecting the quality of life and significant limitation of activity.

Musculoskeletal disorders are the leading cause of disability among individuals in their working-age years, afflicting millions of people. The high risk industries include manufacturing, construction, and food processing. Computer users also contribute a significant number of workers to this group who may be negatively affected by poor ergonomically designed work stations

At this point in time, the problem isn't that employers don't believe ergonomic work stations are a good idea. However, they often fear that without a Ph.D. in engineering and thousands of redesign dollars, they can't begin to attack ergonomic problems in their own workplaces. This is not the case. A simple, four step procedure can help supervisors begin to re-evaluate their workplaces, make ergonomically based improvements, and develop a plan for more extensive ergonomic changes if necessary.

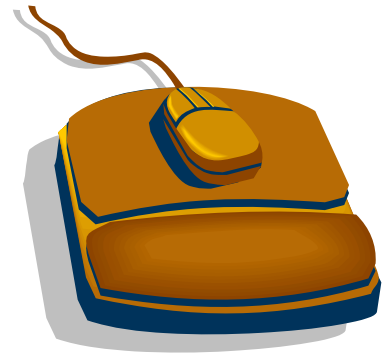
Step 1 Assessing the Need

This very basic step is often overlooked. Without a needs assessment and prioritization, areas which may be least costly, yet have a significant impact, might be overlooked in favor of areas demanding more complicated procedures.

Start this process with existing "paper" information. Study medical and insurance records and your log of injuries and illnesses. Examine trends in worker complaints and suggestions. Does your facility or any particular section have high absenteeism or accident rates? Is there a high turnover rate for a specific task? Where does most of your material handling and repetitive tasks occur? Identify area where large, heavy, and awkward objects are moved.

Now that you have some information, you can begin an assessment, concentrating on sections you've identified by the previous method. On your walk through evaluation, keep these questions in mind:

1. Do workers push or pull carts, boxes, rolls of material?
2. Do they push or pull heavy objects up and down ramps or inclines?
3. Do they perform tasks that involve pushing, pulling, lifting, or lowering forces while the body is bent, twisted, or stretched out?
4. Do they perform tasks requiring their arms to be raised above shoulder height for extended periods?
5. Does the workstation require the same sitting or standing postures all day long?
6. Do hand tools or other equipment vibrate their hands, arms, or whole bodies?
7. Do poorly designed hand tools cause discomfort with continued use?



This list should start you thinking about ergonomic applications in your workplace. Remember to look for modifications made by workers. This may be pieces of foam taped against a work bench or stools with legs sawed off. These are signs that the match between the worker and the work station may need adjustments.

Step 2 Gathering Support

Supervisors are involved in the day to day operations which allow for direct observation and involvement. Many supervisors used to do the same production work and they have an intimate knowledge of the problems involved. Employees will often approach supervisors with problems and solutions about their work stations. As a supervisor, it is very important to listen and acknowledge their ergonomic needs. While ergonomic changes don't always require an extensive investment of dollars, they often involve personnel and equipment changes or modifications which must be supported and approved by top management. Without this support and commitment, all your efforts may be reduced to piles of paper on your desk.

Your employees are a valuable source of problem identification and solutions to ergonomic problems. It is most important workers be told why their jobs are being evaluated, measured, or videotaped. Before you suggest ordering any new equipment, it is vital that employees get a chance to experiment with prototypes. The more involved they are in the selection process, the more readily they will accept different techniques or equipment. Many plants have had tremendous success with organizing quality circles, ergonomic teams, or using their safety committee to work on ergonomic issues.

Step 3 Planning Your Ergonomic Projects

After preliminary studies have shown where problems exist and you've gathered management's commitment and support, you're ready to begin in-depth analysis and evaluation. For this phase you'll need to go back and re-evaluate some of the preliminary data. Identify areas you want to target. Prioritize projects, keeping these questions in mind:

1. Is this problem causing injuries or physical discomfort? Where are jobs/tasks causing the most severe physical trauma or the majority of incidents?
2. If several areas have been identified, can you take interim steps to prevent injuries or discomfort from occurring?
3. Finally, which jobs/tasks can be modified for the least cost, while reaching the largest number of workers experiencing injuries or illnesses?

Step 4 Implementation and Evaluation

Once you have prioritized the projects and determined an appropriate course of action, the parties involved must be informed of actions to be taken and the progress made. At this point, you've compiled a comprehensive list of jobs and tasks that have been evaluated and alternative solutions proposed. Don't try to tackle all the problems at once. Often, it will take some time to complete a thorough test of a new procedure or tool. When a change is made, it should be recorded and a review date set. It is important to allow workers to experiment to some extent. Employees need to have the equipment initially adjusted, and they must work with it long enough to experience the difference before further modifications are made. After the initial trial, brain-storming sessions should be held and everyone involved should discuss how the item or technique is working out.

Applying this simple four step process to evaluate your workplace will help develop long-term success in designing an ergonomically safe work environment. A good fit between workers, tools, equipment and the environment pays off in production, safety and job satisfaction. If you have questions regarding ergonomics please do not hesitate to contact your local SeaBright Loss Control Consultant.