

# Adoption of Ergonomic Program

Contributed by admin  
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U.S. industry is headed toward a workforce crisis that will require critical changes in our national paradigm. Our workforce is not only declining in numbers, it is becoming increasingly multicultural. Even more challenging is the fact that workers now entering the workforce expect greater challenge and greater rewards from their jobs than their predecessors. In the keynote speech at last summer's Material Handling and Logistics Summit, Benoit Montreuil, president of the College Industry Council on Material Handling Education, warned that long-term solutions to the pending workforce crisis will require American industry to adjust its attitude toward its workforce and develop new programs to protect the health and safety of that workforce.

Montreuil believes the crisis facing labor-intensive U.S. industries is threefold:

1. America's workforce is shrinking. As Baby Boomers retire, there will be fewer workers to replace them. Industry must move to protect the health and safety of a smaller workforce.
2. The next generation of technology-savvy American workers is gravitating toward more challenging white collar jobs. Most labor jobs are perceived to be dull, entry-level jobs requiring little skill. Industry must focus on improved automation and technology that will provide more challenging, more varied and safer work environments.
3. Labor jobs have traditionally existed on the bottom-rung of the pay scale. New workers expect good pay and comprehensive benefits. In the past, many businesses have skirted this issue by either outsourcing labor jobs to foreign countries or hiring migrant workers. However, rising transportation and fuel costs coupled with increasing overseas pay scales have caused U.S. companies to re-evaluate the advantages of returning production to the U.S. In addition, the current economic downturn has sent immigrants packing with declining immigration rates expected to continue until the recession ends.

The implementation of ergonomic practices and installation of ergonomic equipment could become a powerful tool in industry's fight to attract and maintain a viable workforce. A proactive attitude toward ergonomics demonstrates value and respect for workers, Peter Budnick, Ph.D., told attendees of a recent material handling conference. The founder, president and CEO of Core 3, Ergoweb and Ergobuyer said, "A well formulated ergonomics strategy supports and accelerates continuous improvement in any organization, facility or supply chain."

Integration of ergonomic practices and equipment into manufacturing and business operations improves productivity, quality control, waste reduction and safety. Ergonomics can "operationalize" a company's respect for its workers, said Budnick. He postulated that many companies fail to recognize the value of ergonomics because they misunderstand the concept and its potential application to their industry. Budnick said ergonomics is "essential in an effective continuous improvement system" in any business or industry.

Ergonomics takes a human-centered approach to task and tool design. It recognizes differences in the individual characteristics and capabilities of workers and strives to accommodate those variables into the design of equipment and the structuring of tasks. In effect, ergonomics works to fit the task or equipment to the worker instead of unenlightened approach of forcing the worker to try to adapt to the task. The goal of ergonomics is to prevent soft tissue, repetitive motion, repetitive stress and musculoskeletal injuries. Nearly half of all lost work days can be attributed to musculoskeletal injuries. These injuries cost U.S. industry more than \$61 billion per year in lost productivity and an additional \$20 billion in annual medical, insurance and workers compensation costs.

The value of respecting workers has been proven time and again. Toyota is one of several international corporations that has made ergonomics a pillar of its business execution plan. When workers are valued, productivity, product quality and customer service ratings increase dramatically while injuries, absenteeism and workplace negativity decrease significantly. Implementation of an ergonomics program demonstrates respect for workers and indicates that their health and safety is a primary corporate concern.

In formulating an ergonomics program, tasks, equipment and the work environment should be evaluated for the following factors:

1. amount and angle of force applied during task performance
2. velocity of movement required to perform task
3. awkward or fatiguing postures required during task performance

4. repetition or frequency of task
5. duration of task and number of times per day it must be performed
6. vibration worker is subjected to during task performance
7. contact pressure that must be maintained during task performance
8. environmental factors present in work environment, including lighting, temperature, noise, etc.

The goal of ergonomics is to eliminate the discomfort and stress these factors cause workers. Studies prove that implementation of an ergonomic program results in significant decreases in injury rates and associated costs, decreases in lost man-hours and absenteeism and a marked improvement in worker job satisfaction. With a general one-year turnaround on investment recovery, the implementation of a comprehensive ergonomics program could be the most cost-effective answer to American industry's looming workforce crisis.