

## Ergonomics in Changing Times: *What's Happening? What Should You Be Doing?*

In your reading about occupational safety, at conferences, and in conversation with colleagues, you may have noticed that ergonomics seems to be a less-hot topic than it was several years ago. The change may have started when a proposed federal ergonomics standard was scuttled by President Bush and Congress during his early days in office. But it's also been influenced by claims that repetitive stress injuries are on the decline.

What's going on with ergonomics—the science and practice of creating jobs and workplaces that diminish the risk to workers who perform them? Some people say employers have gotten the message about identifying and reducing risk. There is a belief that fewer cases are being reported, while others claim there was a spate of overreporting in the past.

Whatever the preferred point of view, experts agree that the risk has not disappeared. And employers who mandate stretch breaks, require ergonomics training, and hire ergonomists to come up with less-harmful ways to work say their interventions are keeping workers from injury and saving their companies millions.

In this *Compliance Report*, one of the leading ergo-consulting organizations explains why ergonomics makes even more sense in a less-robust economy. The article also describes ongoing efforts at Hasbro, Inc., where toy and

game making have been impressively stripped of ergonomics hazards.

### **HUMANTECH, INC.:** **The 30-Inch View**

Humantech, Inc. is a full-service consulting firm specializing in workplace ergonomics. Certified ergonomist Jamie Mallon is vice president and ergonomics engineer. Humantech is headquartered in Michigan, and its consultants work across the country. What's changed, he says, is that ergonomics is less often a stand-alone program but is being deployed as part of other initiatives such as lean manufacturing, the effort to reduce waste in manufacturing, and operations.

So rather than having parallel efforts, companies are doing things such as training their engineers to bring ergonomics concepts into the design of tools and processes. Mallon says it's all about leveraging ergonomics to achieve other corporate goals.

At a large automotive company, for instance, Humantech is helping to design a manufacturing process that is not only faster and more efficient but also safer.

"Today, people are also using ergonomics to engage their workforce in an overall improvement process," says Mallon. "By giving workers simple tools and methods to think about their work, they can effect a great amount of change." Typical of this kind of engagement is ergonomics team members who look for other ways to get involved based on the positive experience of participating.

"Engagement is interesting," says Mallon. "We talk a lot about using

employees to their full potential—and that includes engaging their brains in problem solving and giving them more control over their work areas." Once employees buy into the process, they feel better about the work in general and more open to further change.

Mallon says the current economic downturn creates an opportunity to use ergonomics to preserve valuable resources. Companies are getting pinched from all sides, and an effort that can help reduce incident rates and associated workers' compensation costs with a relatively low capital investment makes more sense than ever.

"The other side of ergonomics," says Mallon, "is that it's been shown to enhance the quality of products and overall productivity. So not only can you avoid those costs thought to be unavoidable, you are also going to have enhanced metrics in terms of quality, delivery, and cost."

In a downturn there are many other ways to further cut the expenses of ergonomic engagement. For example, Humantech is launching an initiative to make much more of its training available online. Rather than asking a company's engineering staff to leave work to attend 2 or more days of training, clients are turning to more efficient Web-based modules.

On the subject of time, Mallon adds: "Time is the currency of a manufacturing plant. People are always looking for more time." So if it takes 0.2 seconds to move 6 inches, the amount of time that can be saved by reducing the need for that move—when multiplied out thousands of times—is significant.

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## A Different View

While it's standard practice for businesses to discuss the "30,000-foot view" of operations, about a year ago, Humantech announced its "30-inch view of business." That is an approach to performance, employee engagement, and operational excellence that looks closely at people and performance. That 2½ feet is basically the distance that an individual's arm extends from the shoulder to interact with the work environment and with other people.

Humantech says businesses can expect significant improvements in profitability, operational efficiency, reduced worker injuries, and other metrics when they concentrate on this space. The 30-inch view helps companies close the gap on what Humantech calls "discretionary productivity." That's described as the difference between production levels of a fully engaged workforce in a well-functioning workplace and work space compared with the productivity in an environment in which tools, processes, and injuries keep people from doing their best work. Removing the "friction" between people and their environment can help businesses uncover new sources of financial gain, the thinking goes.

It's at that workstation level, says Mallon, that continuous ergonomic improvement can best be achieved. He says incremental changes in tooling, positioning, and table adjustment cost little but can achieve much. Training and empowering the operator to see and effect change within his or her work space is key. "Continuous improvement is done *with* people; it's not done *to* people," he adds.

## Enter 'RAPID Teams'

To best achieve that type of change, Humantech favors use of RAPID Team events. RAPID is an acronym for Risk and Performance Improvement Deployment. These group projects, aimed to find and fix ergonomic hazards, are inspired by the Japanese Kaizen method pioneered by Toyota.

Humantech typically facilitates 4-day focused events to achieve real-time improvements, plus action plans for additional improvements and follow-up. It's a highly participatory, multidisciplinary process during which 8 to 10 members of a work group collaborate. At client companies, Humantech ergonomists help the groups find low-cost, high-impact improvements, many of which are implemented the first week, with other changes scheduled for 30, 60, and 90 days out.

Mallon details the process, explaining that a group might be charged with identifying 70 to 100 fixes, 80 percent of which could be achieved within the 4-day period. At one representative RAPID Team event, an important change was implementation of a mechanical lift table. At this particular workstation, materials arrived on pallets, which were placed on the ground, resulting in frequent bending. The group addressed the best type of lift table to bring the product up to worker height. At the same RAPID event, other changes included improving the handles on tools to make them more comfortable and bringing parts bins closer to workers.

Participating in a RAPID event requires 2 to 3 hours of employee training. In addition to the practical solutions that result, participants also gain a strong sense of engagement and come away with a greater sense of control over their work environment. Humantech has successfully used RAPID teams in diverse industries such as automotive, rubber, and chemical manufacturing, among others. Success is measured in a number of ways—from the number of fixes, to the number of workers involved, to productivity gains.

"We are often working against the perception that ergonomics is expert-driven, requires a large expenditure, and takes a long time," observes Mallon. "These RAPID events show people that ergonomics is easy to do, requires very little investment, and gets people working together enthusiastically." Most successful Human-

## Tips for Choosing an Ergonomics Consultant

If you're considering an outside ergonomics consultant, you need someone who is credentialed, caring, and creative. That is, an expert who knows what he or she is doing but has the flexibility to adapt established best practices to match your specific needs.

Humantech recommends a three-step approach to selecting an ergo consultant:

1. Determine why you want to engage a consultant. That is, what do you want to achieve?
2. Target the appropriate type of consultant (member of a consulting firm, professional ergonomics specialist, or professional in a related field who does some work in ergonomics).
3. Evaluate the candidates according to the criteria for expertise and experience, as well as for cost, flexibility, and service level.

Humantech also suggests asking the following questions when selecting someone to help you reach your ergonomic goals. Does the consultant have:

- An advanced degree in technical ergonomics and certification as a CPE (Certified Professional Ergonomist) or CIE (Certified Industrial Ergonomist)?
- An advanced degree in business and extensive experience establishing and maintaining management programs?
- At least three professional references for establishing or improving ergonomics programs?
- Experience analyzing and fixing problem jobs in your industry?

tech initiatives have considerable RAPID Team involvement, he adds.

## HASBRO, INC.: Playing It Safe

If you have kids at home, or if you ever were one, you know about Hasbro, the maker of toys and games including *Monopoly*, *Play-Doh*, *Care Bears*, *Tinkertoys*, *Pictionary*, *Clue*, and *Candy Land*.

Based in Pawtucket, Rhode Island, Hasbro was created in 1923 when brothers Henry and Helal Hassenfeld founded Hassenfeld Brothers, a

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textile remnant company that produced school supplies.

In the 1940s the business brought out doctor and nurse kits, then moved into a series of hit toys such as *Mr. Potato Head* and *G.I. Joe*, known as the first “action figure.”

Hasbro has operated an active ergonomics program since 1989 at its East Longmeadow, Massachusetts, production facility. About 1,100 people are employed at the plant, which is certified as an OSHA VPP Star site. Today, the effort is overseen by Jack Popp, vice president of technical services, and Joe Kessler, senior project manager and manager of ergonomic programs.

“Many employers say they want their people to go home in the same shape in which they arrived at work,” says Popp. “But we go beyond that—we want them to go home *better* each day. They not only receive a paycheck and benefits, but they also get safety information to help protect them off the job. We know the 8 to 10 hours they spend here make up the safest part of their day.”

Protecting personnel is the number one motivation for Hasbro’s ergonomics initiatives. Cost savings is second. “A few pennies on an item determine where it’s sourced and how profitable it is. And injuries drive up workers’ compensation costs, which in turn affect product cost,” says Popp.

He adds that keeping injuries at bay plays an important part in keeping the company profitable.

### **Mature Program Makes a Difference**

Although it continues to evolve and grow, Hasbro executives call the program at the Massachusetts production facility “mature.” Over the years, the site—which manufactures about a million games per week—has taken significant steps to identify and reduce risk. One of the core practices in place is a lifting policy. It mandates that no employee conduct a solo lift of more than 25 pounds; vendors have been instructed to supply materials in 25-pound or lighter parcels.

When lifting, employees are trained to lift to between the knees and shoulder and keep the load close to the abdomen. The goal is never lifting off the floor or overhead. “We work very hard on this and it does work,” says Popp.

At the unionized plant, ergonomic work teams have been established at each of the factory’s 12 work centers, and within the office.

The first team was introduced in the injection molding division in 1994. Each team is composed of equal union and management representation and members are trained to identify ergonomic hazards.

They also serve as ambassadors for their work centers, bringing co-worker concerns to monthly meetings where issues are prioritized and addressed. Successful practices are shared throughout the facility.

Getting resources to fix identified problems is not a struggle. “Because we have management buy-in all the way to the top, we can get funding for a new piece of equipment nine times out of ten if we can demonstrate that it would reduce back or shoulder injury, for example,” says Popp.

For the past 6 years, an annual corporate ergonomics conference has provided an opportunity for team members to present best practices, as well as lesser successes. Lessons learned become a blueprint for future steps.

### **Commitment in Action**

Some ergonomic initiatives that have proven successful at Hasbro over the years include:

- **Strong management/labor cooperation around safety.** The union president is a member of the facility’s strategic steering committee. The company credits strong management/labor collaboration with many positive safety changes.
- **Ergonomic job assessments.** Over 7 years, detailed assessments of the ergonomic risks of every job at the plant were conducted by members of the ergonomics teams. A score was assigned to each job based on

degree of risk, and improvements were made in priority order.

- **Use of plastic pallets.** Wooden pallets are heavy and they splinter. Hasbro identified a lighter, plastic skid that is lifted to a comfortable height by an electric hand jack. Using the plastic equipment supplies the production line with materials without employees having to bend to the floor to reach or lift them. Although the plastic pallets were initially more expensive, they offer long-term value because they are more durable and don’t have to be replaced as often as the wooden type.
- **Regular stretching.** Hasbro has devised a stretching program it calls “Blink.” The idea is that eyes blink when they need to lubricate, and employees should stretch throughout the shift as *they* need to. Personnel receive training in specific stretches created for the type of work each performs.
- **Early reporting.** The company wants to hear about an employee ache or discomfort as early as possible in order to plan an intervention. The goal is to avoid a worsening or chronic situation.
- **Giving back.** Hasbro shares lessons learned with other organizations whenever possible. This is done through presentations at conferences, such as VPP Participants’ Association meetings. “It’s part of our commitment to give back,” they explain.

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## **IS ERGO THE FIX YOU NEED?**

The imperative to preserve resources, retain aging employees, and remain competitive is stronger than ever these days. A more focused ergonomics program could be a tool to help you do that, while offering employees a way to get engaged in the life and future of your business.

The BLR website offers a variety of ergonomics information and solutions. See what might work for you at <http://safety.blr.com>. [30, 51, 152]