

Protect Your Workers Through Ergonomics

Seeking to increase productivity and reduce worker's comp claims, some material handling companies are studying ergonomics.

BY MICHAEL FICKES

Do the demands of the manual material handling tasks you assign fit the capabilities of your workers?

Have you studied the experience of your workers, watched them on the job looking for awkward postures, repetitive motions, fatigue and other indicators of a poor fit?

According to the National Institute for Occupational Safety and Health (NIOSH), ergonomics is the process of fitting the demands of a procedure — a warehouse task, perhaps — to the capabilities of an individual or in this case, a warehouse worker.

You can also study worker's compensation reports. Do certain injuries recur? What tasks seem to be causing those injuries?

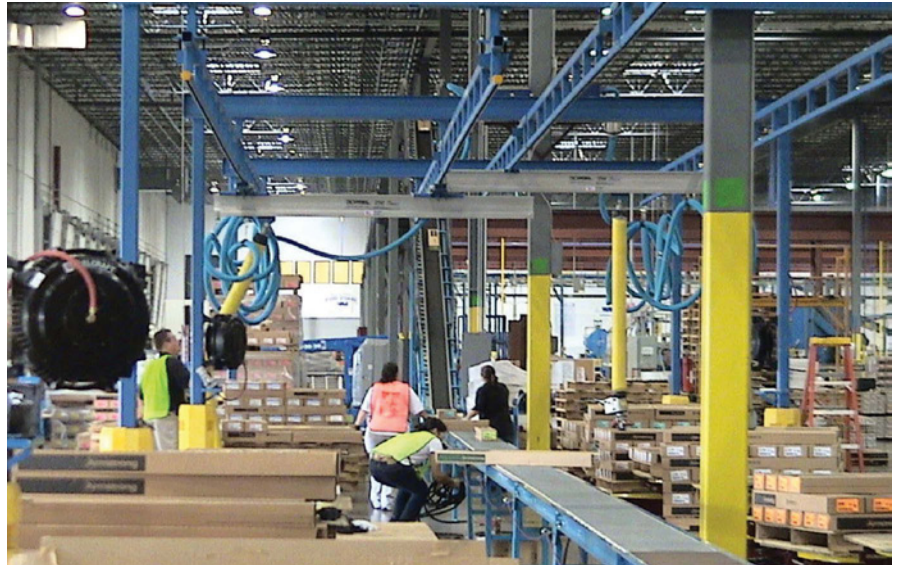
Once you have figured out the problems, you can reduce the severity of the problems by making ergonomic improvements with new procedures or equipment.

Two categories of ergonomic equipment are used in a warehouse: positioning equipment that places materials at a height that enables workers to pick and pack or unpack without fatigue over a full shift; equipment that enables workers to lift and maneuver heavy materials over the course of a shift — without injuring themselves or others.

"There are two basic tasks in the warehouse," says James J. Galante,

"[Ergonomics] makes workers faster and more productive, and it gives older workers and obese worker back their old productivity, while protecting them from injuries that can raise worker's compensation costs."

— James J. Galante, director, business development, Southworth Products Corp.



An ergonomic warehouse floor with an adjustable height conveyor and a Southworth pallet positioning device — to the right of the conveyor — to prevent bending and reaching. The yellow tube in the left rear is the vacuum arm of a Gobel cantilevered bridge crane for heavy lifting. Photo courtesy of Gobel Inc.

director, business development with Southworth Products Corp., a manufacturer of ergonomic materials handling equipment for vertical lifting and work positioning. "First, you pick a load off of a pallet or shelf, and second, you put a load onto a pallet or into a container."

If a pallet sits on the floor, a worker has to bend over to pick up or place a carton, continues Galante. If a pallet sits up on a rack, he or she has to reach up. Bending down and reaching up can produce awkward positions that can lead to injuries.

Even worse, a half-empty pallet may sit on the lower level of a pallet rack — the concrete floor. "The underside of the shelf above, framed by steel beams, is 60 inches from the floor," Galante says. "The worker must stoop under the beam, often putting one foot onto the half empty pallet to reach in and grab a carton."

The maneuver risks several injuries, says Galante. Stepping up with one foot twists the hips, which disables the back muscles on one side of the body. Then reaching in extends the back and can cause a strain.

Once, so what? But warehouse workers carry out thousands of lifts per day. The science of ergonomics teaches that all lifting should be done close to the body — not from an extended position — and from a height somewhere above the knees and below the shoulders.

Southworth products position materials properly so that workers can pick them up comfortably — throughout

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a shift. For instance, PalletPal Level Loaders use springs or airbags to keep a pallet at the ideal height required by a picker – a height between the knees and shoulders.

How heavy is that box?

Some companies restrict the weight workers can lift without a device to less than 40 pounds, says David Butwid, vice president, sales, marketing and customer service with Fishers, N.Y.-based Gorbel Inc., a manufacturer of ergonomic lifting products.

As a consequence, in receiving and shipping areas of a warehouse, where pallets are broken down or assembled, workers typically use mechanical lifting devices.

When handling boxes, for instance, an overhead crane may operate as a vacuum lift, using an overhead runway to move materials over short distances.

“Research at the Rochester Institute of Technology (RIT) has shown that our crane systems can enable 90 percent of female workers and 100 percent of male workers to handle loads under 1,000 pounds safely and productively,” Butwid says.

Another important part of the RIT study examined the effort exerted to handle materials using lifting devices.

An accepted ergonomic principle, notes Butwid, holds that workers must not exceed 33 percent of their aerobic work capacity for extended periods. Laboring above the 33 percent mark can cause a level of fatigue so great that a worker cannot recover before the start of the next day’s work.

Why is ergonomics important now?

Haven’t material handling companies gotten along for years without worrying about ergonomics?

Indeed, some companies have. But that is changing with the changing character of the workforce.

The recent recession did such damage to retirement funds that many older workers have found it necessary to put off retirement well beyond normal retirement age.

“The workforce is older,” says Galante, “and it is also overweight.”

Indeed, a 2011 Gallup Poll asked 109,875 full-time workers for their height and weight. Two-thirds were overweight or obese, with one-third in the obese category.

A 2007 study by Duke University found that obese workers file twice as many workers compensation claims as other workers; medical costs for obese workers are seven times higher; obese workers miss 13 times the number of days of work.

Add those problems to the fact that many of today’s overweight and obese workers are retirement age or older.

The only way around those problems is to bring ergonomic tools to warehouse workstations.

“It makes workers faster and more productive, and it gives older workers and obese worker back their old productivity, while protecting them from injuries that can raise worker’s compensation costs,” Galante says. ●



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