



# The Link

September 12, 2007

VOLUME 5 ISSUE 9

## Work-Related Injuries in the Professional Cleaning Industry

By Jolynn Kennedy

It probably comes as no surprise that carpenters and construction workers are commonly afflicted with work-related musculoskeletal disorders (WMSD). Baggers and stock handlers in grocery stores are also frequent sufferers because of all the lifting and carrying. And, scores of cases of Carpal Tunnel Syndrome have been reported among office workers experiencing pain in their hands, wrists, and arms due to typing at computers.

However, what might surprise many is that an even more dangerous profession when it comes to work-related injuries and WMSD is janitorial work. Indeed, the U.S. Occupational Safety and Health Administration ranks it number 5, just after factory workers. It is for this reason that cleaning manufacturers are increasingly focusing on ways to make their equipment lighter, more flexible, and easier to use and maneuver.

### Defining Terms

Before discussing what steps some manufacturers are taking to address the problem of work-related injuries, the definitions of two terms are in order. The first is WMSD. These work-related injuries affect muscles, tendons, and nerves. They usually develop as a result of the same muscles being used over and over again—a key cause of the problem—with little recovery time between repetitions.

One of the best examples of this in the cleaning industry is a hotel housekeeper. Although a housekeeper may notice pain developing in his or her hands, wrists, arms, and shoulders shortly after beginning the day's cleaning tasks—usually from pushing and pulling a vacuum cleaner and performing other cleaning duties—he or she may have 20 or more guest rooms yet to clean, and each one must be cleaned in 20 minutes or less. There simply is no time for breaks, allowing no rest after cleaning each guest room.

Today WMSD accounts for:

- Thirty-four percent of all lost-workday injuries and illnesses
- Eighty-five percent of all workers' compensation claims
- As much as \$25 billion in workers' compensation costs
- OSHA violations costing employers \$1,000 to more than \$100,000 *per violation*

The second term that must be understood is ergonomics. Most experts in the professional cleaning industry define ergonomics as the science of designing cleaning equipment to *fit the worker* rather than physically forcing the worker's body to fit the machine.

The key objective of designing cleaning equipment in this manner is to help reduce physical stress on the body and prevent work-related injuries. And designing

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equipment that fits the worker is so critical that it has been estimated that fully one-third of all compensable back injuries, as an example, could be eliminated when cleaning workers use ergonomically designed cleaning equipment.

### **Problem Areas**

Since the 1930s, movement studies have been performed attempting to pinpoint the cleaning tasks that most often result in a work-related injury. In virtually every study, the two that top the list are vacuuming and floor care work, specifically mopping, lifting buckets, and wringing mops. These are usually followed by using floor care machines such as buffers, trash removal, and the transport of cleaning equipment from room to room or building to building.

These same studies have also tried to pinpoint where WMSD injuries are most likely to occur. In practically every study, the following are the most injury-afflicted parts of the body resulting from cleaning work:

- Back
- Wrists, elbows, and hands
- Neck
- Fingers
- Shoulders
- Arms

### **Designing Ergonomically**

For decades, the manufacturers of cleaning equipment did relatively little to address the ergonomic issues of using cleaning equipment such as vacuum cleaners, carpet extractors, floor machines, and other tools. It does not appear that they ignored the problems as much as the problems were not clearly understood. As a result, heavy, awkward, and vibrating vacuum cleaners were the norm for many years, as were weighty, metal-framed floor machines. Today, some manufacturers such as Tornado are tackling ergonomic equipment issues with the goal of reducing or eliminating work-related injuries by designing machines with such features as, among other things:

- Machines that are very light in weight; for instance, one new commercial vacuum cleaner has been introduced that weighs only eight pounds, which is as powerful but less than half the weight of most other professional vacuums.
- Vacuum cleaners that have lightweight handles contoured to fit comfortably in the user's hands
- Floor machines that have two or three finger controls and are designed using one-piece rotationally molded plastic. This not only makes the machine lighter but helps absorb torque and vibration, which can harm hands and wrists.
- A low center of gravity for ride-on equipment, increasing stability and the ease of handling the machine
- Self-propelled floor machines that just need to be guided over a floor area for cleaning

### **The Worker's Role**

Even though cleaning equipment is now available that will help reduce work-related injuries, cleaning workers have a role to play in their own safety as well. There are general cleaning tips that custodial workers must always follow, such as always bending at the knees; relaxing their grip on tools, handles, and cleaning equipment; and switching hands periodically.

And two of the most important guidelines to follow are to always ask how to safely use new cleaning tools and equipment. Many accidents occur because cleaning workers are simply not sure how a machine is to be used. And second, always stop if pain

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develops. A short rest can eliminate or minimize most work-related injuries and can prevent a minor problem from becoming a much more serious one.

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