A decade ago, Roberta Furger profiled the problems of repetitive strain injuries (RSIs) for the magazine PC World and noted, “today’s [computer] users work at the keyboard for hours at a time, never varying their activity” (Furger, par. 14). In her report, she proffered as cautionary tales a few casualties of this trend: a Merrill Lynch vice president who could no longer carry his own briefcase; a veteran editor who could not type without extreme pain; and her own experience with debilitation that forced her to use a tape recorder to compose articles. As industry and business adapted computers to an ever-expanding number of office tasks, more could be accomplished from a single location. In turn, employees unwittingly began to spend greater time in sedentary — and largely unnatural — positions.

It seemed we got ahead of ourselves. Or technology got ahead of us. Forced into awkward poses while operating machines for extended periods, humans exhibit signs of stress, immediate and cumulative. Years spent sitting at “poorly designed workstations” with “ill-fitting chairs” wreak havoc on the health and well-being of white-collar workers, who suffer symptoms that were once more familiar to blue-collar counterparts on assembly lines and in manufacturing plants (Furger, par. 13). One of the chief culprits of so much pain, numbness, and fatigue is carpal tunnel syndrome (CTS), a musculoskeletal disorder caused by “entrapment and compression of the median nerve [in the forearm] because of structural, muscular, and postural misalignment” (Thornton, 10). In 1999, employees afflicted with CTS spent a median 27 days away from work, ranking CTS the number one nonfatal occupational injury or illness (“The Editor’s Desk”).

How did we let this happen? The study of ergonomics — or “human factors” as it is also known — was in place well before the explosive growth of PC use. James and Witt suggest it can be traced back nearly three hundred years to when Italian physician Bernardino Ramazinni wrote of the injuries of workers who “all day long stand or sit, stoop or are bent double” (James, par. 3). Unfortunately, the best principles and practices of designing “tasks and work environments so that people can work within their capacities” were not initially applied to computer hardware and peripherals and workplace design (James par. 6). Though information about preventing RSIs like typing-related CTS is now widely available, Furger was writing of these
injuries well before the boom and bust of the New Economy, the dominance of Google, or even the ubiquity of e-mail.

In 1993, employers and health providers were just beginning to contemplate policies and programs to combat RSIs through employee training. Wrist rests, split keyboards, special braces, and fully adjustable workstations and chairs were only beginning to enter the market. When reports and complaints of computer-related injuries became a matter of widespread public discussion, three things happened: 1) many companies, including PC makers IBM and Compaq faced lawsuits for selling “inherently defective equipment” that purportedly caused injury due to poor design; 2) employers encountered increasing injury and compensation claims; and 3) specialty manufacturers identified an opportunity to profit from the “epidemic” and began to peddle a wide array of products to make the human/machine interface more comfortable (Furger, par. 19).

Furger’s article is a useful benchmark of the country’s collective complaint and the resulting response to computer-related RSIs. Today, everyone who uses a computer in the workplace benefits at least minimally from the heightened awareness of RSIs, their causes and impacts, the greater variety and evolution of computer accessories, and the understanding that regular breaks, exercise, and better work habits are as much a part of smart computing as ergonomic equipment.

There is, however, one aspect of the RSI issue that has enjoyed little progress since 1993: government action. Librarians, particularly cataloging and technical services librarians who spend time a great deal of time keyboarding, would be well-advised to know that they are largely on their own with regard to the prevention of workplace RSIs. Overall, libraries and library management nationwide do seem to be concerned with preventing problems like carpal tunnel syndrome (CTS) and in creating comfortable and healthy work environments. Unfortunately, implementation and enforcement of stringent (read: mandatory) federal ergonomics standards remains unlikely in the current political and economic climate and for the foreseeable future.

What follows is a brief overview of noteworthy events relating to ergonomics regulations and a few tips on what catalogers should consider to ensure healthy lives and limbs.

On July 20, 2000, Eugene Scalia—son of Supreme Court Justice Antonin Scalia—appeared before the House Committee on Education and the Workforce. Speaking on behalf of Gibson, Dunn & Crutcher LLP, a law firm that represents businesses in labor disputes, Scalia read a prepared statement that called into question the guidelines of a proposed Occupational Safety and Hazard Administration (OSHA) rule on recordkeeping. His three-part argument attempted to 1) prohibit personally identifiable symptoms from being considered “illness and injury,” essentially limiting judgment and definition
of illness and injury to doctors and employers; 2) remove any language (and liability) with regard to including the “aggravation of a pre-existing condition” in the definition of a “work-related” injury; and 3) exaggerate OSHA’s “confusion” over its own recordkeeping mandate (Scalia, par. 7). Scalia’s logic and rhetoric successfully play up images of unconscionable employees who, injured playing weekend football or already suffering arthritis, take advantage of their employers and benefits by claiming pain at the job site. At the heart of Scalia’s testimony was Big Business’ fear that changes in recordkeeping regulations would increase the scope of data collection, which would eventually statistically confirm the widespread problem of workplace musculoskeletal injuries. In his close, Scalia noted:

I am concerned … that if this recordkeeping proposal becomes law it will force businesses to record non-occupational musculoskeletal complaints as work-caused injuries; I am concerned that OSHA will then use those records to contend that employers have “recognized” an ergonomics hazard in the workplace (Scalia, par 18).

In turn, businesses could expect subsequent government reform, more stringent ergonomic standards, increased liability, and—most loathsome of all—unwanted expense. Overall, Scalia finds the proposed OSHA ergonomics rule “deeply flawed” and attempts to deflect blame for the pain of CTS-sufferers from work, workplace, and employers.

Business-friendly politicians have balked at reform in ergonomics rules for some time. While Republicans who rail against the notion of “big government” and its regulatory excesses are largely responsible for these delays, a fair number of Democrats have dug in their heels as well. Ironically, it was a Republican, Elizabeth Dole, who initially proposed an “ergonomic initiative” in 1991 when she served as Secretary of Labor during the first Bush administration (Mayer, par. 14). In time, the eminent National Academy of Sciences (NAS) would conduct several comprehensive studies on RSIs and related workplace injuries. As recently as 2001, NAS reported that musculoskeletal disorders affect “about 1 million workers and cost the nation between $45 billion and $54 billion in compensation expenditures, lost wages, and decreased productivity.” In addition to the cost issues, the NAS noted that “Americans make nearly 70 million visits to physicians’ offices each year seeking treatment for MSDs” (“Some Jobs Increase Risk” par. 8).

Such reports have, however, fallen on deaf ears in Washington or have been met with outright ridicule. William Kilberg, a Washington labor attorney who represents corporations, has not been alone in questioning the need for establishing ergonomics guidelines. Nor has he been alone in claiming “there is no scientific evidence linking specific injuries to the workplace” (Mayer, par. 5). Eugene Scalia’s remarks were recorded in the final months of President Bill Clinton’s second term in 2000. Throughout Clinton’s two terms, his administration had worked fruitlessly to enact new OSHA ergonomics
regulations. During those eight years, six total weeks of public hearings were held on ergonomics regulation issues, an ample length of time described by Ralph Nader as “almost unprecedented for OSHA” (Nader, par. 4). Despite this attention and focus, reticence prevailed in Congress. “While the Clinton administration estimated its [proposed] rules would have cost businesses $4.5 billion, industry estimated the costs would run as high as $100 billion” (Mayer, par. 16).

New ergonomics rules would not be implemented until after the 2000 election — and absent Congressional approval — when President Clinton chose to issue a last-minute executive order before leaving office. The new regulations would, among other things, require that injured workers be compensated for their injuries in some cases (Strope, par. 11). While Clinton was in office, and with Democrats in key positions at the Department of Labor and its sub-agency OSHA, American workers at least had the country’s workplace safety officers in their corner. Until January 2001, OSHA disagreed with the business lobby’s estimate of $100 billion a year in costs to comply with standards and stated that business groups “grossly exaggerated costs by basing calculations on the most expensive solutions assuming the agency would mandate use of those solutions” (Roemer, par. 3). In contrast, OSHA-under-Clinton estimated that costs of $4.5 billion a year “would be offset by a savings of $9.1 billion a year from the prevention of 4.6 million injuries over…10 years” (Roemer, par. 3).

The country and its political culture changed dramatically after the 2000 election, and so did the ergonomics debate. Clinton’s last-ditch and somewhat questionable action on behalf of labor — the timing of which Ralph Nader claimed, “avoided losing business contributors to the Democrats’ political campaigns” — was ultimately for naught (Nader, par. 3). The newly elected President George Bush immediately froze the pending Clinton regulations, which were to have gone into effect as of January 16, 2001. By April 2001, through use of the Congressional Review Act — a “fast-track way to repeal … regulations, by mandating a simple up-or-down vote and permitting now filibusters or amendments” — the Bush administration successfully repealed Clinton’s mandate, disingenuous insisting that it would revisit the ergonomics issue at a later time (Green, par 15).

Mere weeks after the April 2001 repeal, President Bush nominated a new Department of Labor (DOL) solicitor, a position that oversees the DOL’s legal teams. If advocates for ergonomic standards felt a measure of defeat in the repeal, it was compounded by the announcement that Eugene Scalia — the man who painted RSI as “psychosocial science” and who wrote that “the employees most likely to complain of musculoskeletal discomfort are those who do not like their jobs” — would lead the DOL’s 500-plus attorneys (Green, par. 3). Throughout 2001, the Democrat-controlled Senate blocked a vote on Scalia’s nomination. Like Clinton, Bush utilized an exceptional legal measure to seat Scalia in the DOL’s number-three spot: during a Congressio-
nal recess in January 2002, the President was able to employ special powers that grant him license for recess appointments.

In the announcement for perhaps its most substantial research report on musculoskeletal injuries, the National Academy of Sciences emphasized the need for better data collection.

Because the nation lacks a uniform and comprehensive method to gather and track data on MSDs, a coordinated and standardized data-collection system is needed…To that end, the Bureau of Labor Statistics [an agency of the Department of Labor] should provide more comprehensive surveillance of work-related MSDs by obtaining from employers specific information about jobs, workplace illnesses, and the characteristics of workers performing certain jobs. Standardized coding procedures and more precise and consistent descriptions of risk factors also should be developed for large data systems (“Some Jobs Increase Risk” par. 10).

The tone and position of the NAS recommendations were exactly the opposite of Eugene Scalia’s testimony before House members in July 2000 (and on, no doubt, other occasions) and was largely regarded as unwanted advice by the Big Business-influenced Bush White House. Scalia and others had argued for narrowed definitions of illness and injury and pressed for reduced recordkeeping, saying “recording is unnecessary to humanely responding to workers’ difficulties” (Scalia, par. 9). With Scalia and similar-minded appointees leading the Department of Labor, progressive and aggressive data collection would be unlikely. By ignoring the NAS research and by limiting the amount of data collected by the U.S. government on RSIs, musculoskeletal injuries, and carpal tunnel syndrome cases, reportage of epidemic-scale numbers is minimized. Without numbers, there is no epidemic and, in turn, no dire story to tell the American public. Absent a story that might rile the public, government leaders (and their campaign contributors in the business world) need fear no pressure for reforms in ergonomic standards or workplace conditions. As a result, stringent federal ergonomics guidelines are — and will continue to be — virtually impossible to imagine.

So what does all this political history and maneuvering have to do with librarians and catalogers? Because catalogers spend so much time using computers for data entry and other work, they should be aware that no current federal mandates specifically protect them from poorly designed workstations or equipment. At best, OSHA offers ergonomic recommendations and voluntary industry guidelines.

This is not to say that libraries are not being responsible for or are not attuned to their employees’ ergonomic needs and RSI prevention. If anything, library-science literature suggests that the profession is aware of the issues and conscientiously works to implement smart workplace design and educa-
tional programs. Thankfully, librarians do not hesitate to distribute surveys and collect information and statistics. In 1992, for instance, Elizabeth Steinhagen and Carolyn Mueller surveyed the heads of cataloging in 185 U.S. academic libraries. They observed in Technical Services Quarterly:

Although librarians have successfully made use of the computer to work more efficiently, library workers have been less successful in adapting themselves and their psychological needs to it and to the environment required by the machines. Through lack of funds, inadequate planning, or simple neglect, librarians often have not created environments that are conducive to the most efficient interaction between humans and computers (Steinhagen 33).

Data collected by Joyce Thornton from the Association of Research Libraries membership in 1996 showed “a need for administrators to take immediate action to prevent and reduce the potential for [CTS] injury,” and it prompted Thornton to argue that, “financial constraints must not be used as an excuse to do nothing or to do very little” (Thornton 17). When Elizabeth Dole was first introducing the word ergonomics to her colleagues in the early 1990s, the Sterling C. Evans Library of Texas A&M University was already “actively maintaining records on complaints that were believed to be CTS” and implementing both relief and preventive measures through new chairs, keyboards, workstations, education, and training (Thornton, “Battling Carpal Tunnel,” par. 1). In contrast to the sort of Eugene Scalia-like claims that only people who hate their jobs complain about musculoskeletal problems, librarians have been finding that “especially conscientious and productive workers are often most severely affected: those who work through lunch, volunteer for overtime, and take on projects — in short, the ones who do whatever it takes to get the job done” (Furger, par. 10). Despite a somewhat limited amount of reportage in the profession, in many ways libraries have been ahead of the curve in policy and prevention.

Under OSHA supervision, half (26) of the U.S. states currently administer their own occupational safety and health programs, which requires them to meet and/or exceed OSHA’s federal guidelines. To date, only California and Washington (and potentially North Carolina) have adopted state ergonomics standards — the only U.S. jurisdictions willing to keep pace with places like British Columbia, Sweden, and the European Union in terms of workforce safety measures (Minn. Dept. of Labor and Industry 3). Minnesota is one of the 26 state-plan states, and in October 2002 the Minnesota Department of Labor and Industry’s (MDLI) Ergonomics Task-Force issued its long-awaited ergonomics recommendations to the MDLI’s commissioner. The recommendations are mixed, with a primary emphasis on expanded education for reducing work-related musculoskeletal disorders and with roughly half of the task force recommending that the state follow the federal voluntary approach (MDLI 4). Part of Minnesota’s own Occupational Safety and Health Act “requires employers in high-hazard industries to maintain a written acci-
dent-reduction program, focused on the particular hazards for that employer” (MDLI 3). Libraries, naturally, do not fall in that category. Similarly, it is important to know that under federal OSHA guidelines, certain employers are exempt from keeping injury and illness records. Educational services (SIC code 82), which include schools, colleges, universities and libraries, count among those employers (U.S. Dept. of Labor).

As noted previously, absent numbers as proof of health epidemics, no one feels any pressure to undertake or enact reforms. It is up to catalogers and their colleagues to ensure that employers (libraries) and library management are responsive to their ergonomic needs, that data is kept on the prevalence of RSIs like CTS, and that proactive ergonomics policies are in place. Susan Henricks advises that every library have an ergonomics plan that includes three parts: education, work-site analysis/environmental changes, and organizational/behavioral changes. She explains:

Through education all staff will become aware of the potential risk of injuries, their causes, symptoms, prevention, and treatment. Work-site analysis will include a health and safety review to identify jobs and workstations that may contain musculoskeletal hazards and potential risk…Organizational and behavioral changes are critical to the success of the ergonomic program. New strategies…such as job rotation…[and] task enlargement…[allow employees] to break up the day with varied tasks…Revising the break schedule may also be considered. Studies have found that more frequent breaks that are shorter prevent the body from being fatigued or becoming vulnerable to over-use (Henricks, par. 10).

Colorado State University Libraries provides a model and comprehensive “ergonomics and wellness” plan online at http://mant.library.colostate.edu/pers/ergo.html.

Recommendations and measures for preventing CTS and other RSIs are widely available online and on library shelves. Consequently, I have not bothered to outline best practices here. Catalogers can benefit significantly from smart workspace design, healthy living and working habits, and by making the right decisions when their bodies begin to complain. However, they should also remember that technology, particularly software, can help reduce fatigue and injury.

If repetition is the culprit and cause of lasting CTS injuries, reducing unnecessary keystrokes from tasks is likely to reduce the likelihood of future pain, lost workdays, and medical expenses. Reducing keystrokes can be as complicated as reengineering and restructuring department work processes or as “simple” as making the most of software already being utilized. A few technical services professionals have suggested standard software features to avoid duplication and “reduce the user’s involvement in workflow by automating..."
certain labor-intensive or error-prone tasks,” particularly “a standard macro scripting language that will allow the development of sophisticated subroutines unique to your library’s workflow patterns” (Padham Ouderkirk, par. 9). The best Integrated Library Systems (ILSs), “should provide the tools to automate any function that can be input by an operator and should eliminate the need to add the same information more than once” (Padham Ouderkirk, par. 13). (Unfortunately, some redundant aspects are entrenched in design; consider the “double-click” requirements when operating a mouse.) Much apparently depends on careful planning and consultation with a library’s ILS vendor during the design phase, but tech-savvy catalogers can do much on their own. Librarian John Archer spent one afternoon to write and debug a macro “to streamline the review/receiving process” for books at his library. After a three-week evaluation, the automated process had saved 3,375 keystrokes and reaped other rewards (Archer, par 4).

Eugene Scalia’s recess appointment was set to expire in January 2003. Expecting a hard confirmation battle in the U.S. Senate, he opted to resign from his post at the Department of Labor. Although Scalia may be gone now, conservative attitudes toward and influence on federal ergonomics regulations are likely to prevail. Though a change in the Presidency might bring changes in federal oversight of workplace rules, no one should hold his or her breath. In the meantime, only one thing is certain: CTS and RSIs will continue to afflict catalogers and other library-science professionals. As a result, “[thinking clearly, reacting patiently, and generally doing your job well [will be] very difficult when you’re hurting” (de Stricker, par. 13). Without government mandates and strict policing, it’s up to library professionals to foster workplaces that are responsive to complaints about RSIs and active in preventing them.

Works Cited


Minnesota Department of Labor and Industry. “The State of Ergonomics in Minnesota: A Sum-


