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Remember when we all talked about ergonomics?

"Whatever happened to ergonomics?" Florida business consultant Tim Bryce titled an essay he wrote two years ago.

The question still lingers. It's rare to spot one of those odd-looking chairs where you sit and kneel at the same time. And who talks anymore about carpal tunnel syndrome, the scourge of offices in the '80s and '90s?

It hasn't been forgotten, say researchers, business officials and health care professionals.

Companies, particularly large ones, have made strides - not always using the most expensive or highest-tech equipment - to update offices so workers are less likely to contract back or neck injuries. Critics, though, aren't so sure.

"I do think the word is getting out," said James Bliss, an associate professor of psychology who directs the doctoral program in human factors and ergonomics at Old Dominion University. "Most businesses have started to acknowledge the importance of it."

Dan MacLeod, an ergonomic consultant outside New York, said: "Ten years ago, in most of the companies where I worked, I had to explain to employees what ergonomics was. Now when I say I'm the ergonomics guy, they generally know what I'm looking at."

Ergonomics underwent "a long developmental period" and has reached "late adolescence," said Maury Nussbaum, a professor of industrial and systems engineering at Virginia Tech.

"You have a lot of basic research happening at the universities," he said. "That's slowly starting to filter out to applications in the workplace."

Businesspeople point to declines in the incidence of workplace injuries as proof they're serious about ergonomics.

U.S. statistics, for instance, show a sharp drop in the number of reports of carpal tunnel syndrome in private industry - from 22,140 in 2003 to 13,010 in 2006. Paige Kurtz, a certified hand therapist at Bon Secours Health Center at Virginia Beach, also has seen a falloff in carpal tunnel syndrome, a wrist disorder linked to repetitive motion.

"Frankly, I think results matter," said Marc Freedman, director of labor law policy at the U.S. Chamber of Commerce, "and we're seeing lower injury rates across the board."

Others say it isn't that simple.

"I don't think carpal tunnel syndrome is decreasing," said Dr. Joan Rose, a hand surgeon in Virginia Beach. "I think it's not being covered by workmen's compensation carriers." The reason, in part: growing evidence that the illness is "multifactorial," influenced by work and home conditions.

Also, some unions say the data reflect a weakening of federal reporting requirements, part of what they see as a governmental about-face on the issue.

In late 2000, departing President Clinton approved an "ergonomic standard" for companies, mandating training, "job hazard analysis" and possible fines. The Occupational Safety and Health Administration said it would save businesses \$9 billion a year and stave off nearly half a million injuries. Freedman said it would be "economically crippling," subjecting employers to "a never-ending cycle of review and adjustment."

President Bush and Congress dropped the standard in 2001.

After that, "the companies gloated and then went about reducing or eliminating their efforts," said Jackie Nowell, the health and safety director at the United Food and Commercial Workers union. "And the government decided not to regulate or enforce but issue toothless guidelines."

The word ergonomics - which is derived from the Latin "ergon," for work - carries many definitions. For ODU's Bliss, it means "the physical aspects of the human-technology interface." Others like to describe it as the science of making the job fit the worker, rather than the other way around.

Taking the long view, consultant MacLeod says it goes back millennia to the cavemen's invention of the wheel. The discipline's beginnings are usually traced to World War II, when scientists tried to improve the design of cockpits for fighter pilots.

In today's world, ergonomic success does not depend solely on the most cutting-edge innovations, health care professionals say. Training also is key.

"Employers are doing a good job with the right equipment," said William Fetterolf, a physical therapist with Bon Secours in Virginia Beach, "but they're not necessarily educating employees on how to use it. So they don't know how to shift or adjust their chairs."

Workers, too, have a responsibility - for instance, to maintain proper posture. "You can have the best setup in the world, but if you don't get up and stretch every couple of hours, you're going to get an injury," said Jim Browning, a physiotherapist in Virginia Beach.

Will all of this help a company's bottom line?

Jeff Sanford, a manager for Humantech, an Ann Arbor, Mich., ergonomics consulting firm, said it's hard to link ergonomic advances to cost reductions. But MacLeod said he has examples of companies as varied as a die-cast operation and a paper manufacturer that have saved at least \$1 million a year by reducing worker's comp and production costs.

"You don't have to be a Toyota to do this; a small company can do it," he said.

David LeGrande, director of occupational health and safety for the Communications Workers of America, credited hospitals and nursing homes with embracing improvements, such as mechanical devices to lift patients. Locally, spokeswomen from Bon Secours, Chesapeake Regional Medical Center and Sentara Healthcare said all of their hospitals have such lifts.

MacLeod said the mining and construction industries have been slow to change, but he praised the meatpacking business for "developing better systems to keep knives razor-sharp. A dull knife causes people to have to work harder."

Matthew Marshall, associate professor of industrial and systems engineering at Rochester Institute of Technology, has found most small- to medium-sized grocery stores unreceptive to ergonomics: "A larger grocery store with higher revenue is able to invest in things maybe more than a privately owned store struggling to get by."

Susan Mayo, a spokeswoman for Farm Fresh, the largest grocer based in Hampton Roads and part of Minnesota-based Supervalu Inc., would say only that the local chain "complies with all OSHA regulations."

Elsewhere locally, BAE Systems Norfolk Ship Repair focuses not on "major equipment," but on "personal protective gear," such as padded safety gloves, spokesman John Kowalczyk said.

For the communication workers union, Verizon is the largest employer in Virginia. "For the most part, in a number of office environments in our area, there are no concerns at this point," said Byron Taylor, executive vice president of Local 2202 in Virginia Beach - though he said safety checks could be more frequent.

LeGrande, the union's national safety director, had harsher words for Verizon, saying it refused to bend production quotas when jobs lead to injuries. Verizon spokesman Harry Mitchell chalked up the complaints to imminent contract talks, when the union "traditionally turns up its rhetoric.

"It's important to us that our employees function in a safe environment," he said.

Ergonomic aids can range from a stepstool to a \$1,000-plus chair. The more modest solutions tend to be more popular.

At the Relax the Back Store in Virginia Beach, for instance, a \$1,795 chair, complete with headrest, viscoelastic foam and inflatable lumbar support, sells less often than the much cheaper "task chairs," which have fewer adjustments, said Mike Brazell, the medical liaison.

Likewise, Decorum, a furniture store in Norfolk and Virginia Beach, annually sells only a handful of "sit-stand desks," the height of which can be raised so the worker can stand or sit.

Owner Claus Ihlemann has one, allowing him to stand at the end of the day to reduce back pain. The desks, he said, are more common in his native Europe, "which is far more aware of the benefit of being able to change your work position in the course of the day."

But more expensive isn't always better, researchers say.

"It doesn't take a lot of technology to get something effective done," Marshall said. "The companies that recognize that effective change can be had at a low cost have been the ones most successful in incorporating change in the workplace."

It can be as simple, he said, as providing stepstools to avoid dangerous reaches.

Another vital ingredient: "You have to make the employee part of the process," Marshall said. "Tap the knowledge of the employee day in and day out. If you are part of the solution, you are more receptive to change."

Northrop Grumman Newport News seems to follow both pieces of advice.

The local shipbuilder has two full-time ergonomic specialists, said Jim Thornton, director of environmental health and safety. But some recent innovations, he said, were generated by employees, such as a "beach chair" that allows welders to do overhead work more comfortably.

"Most good ergonomic solutions are very, very simple," he said. "You do not have to purchase a lot of capital, high-tech stuff. Most of this is good thinking through common sense."

Philip Walzer, (757) 222-3864, phil.walzer@pilotonline.com

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