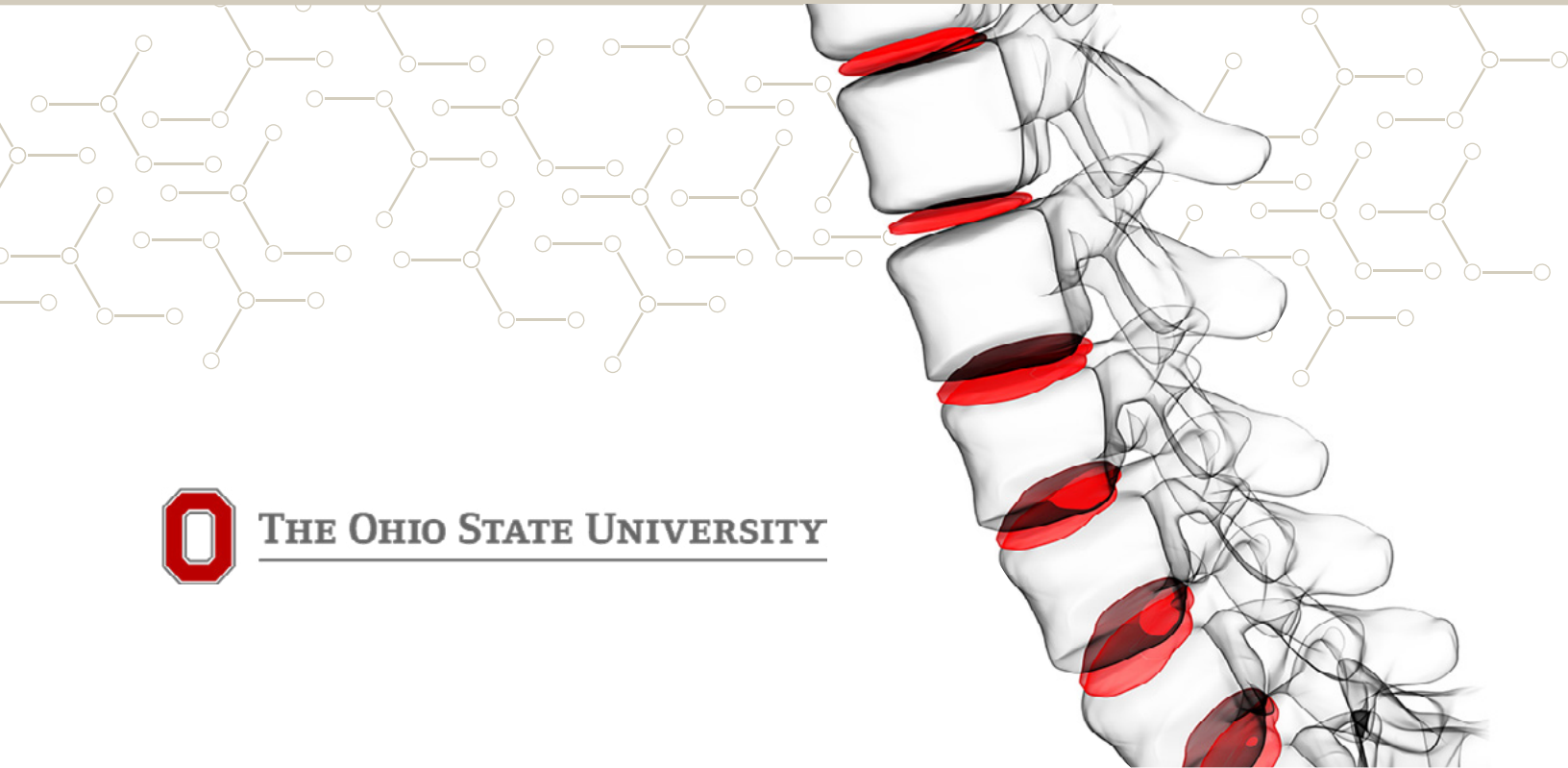


REDUCING MSDS TO

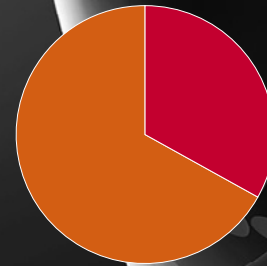
STRENGTHEN YOUR BOTTOM LINE



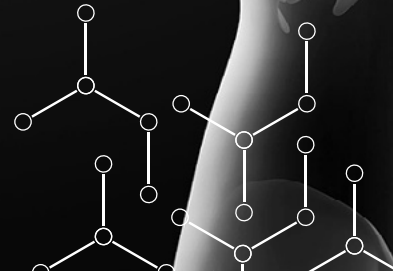
THE OHIO STATE UNIVERSITY

Just as water seeks its own level, managers seek a sturdy bottom line. And they know that healthy workers contribute more to that goal than workers who are at risk of getting injured. Still, musculoskeletal disorders (MSDs) are alarmingly common in the United States. Back injuries alone now cost organizations \$100 billion a year—not simply to heal injuries but also to offset their effect on efficiency, productivity, and morale.¹

¹Katz, Jeffrey N. "Lumbar Disc Disorders and Low Back Pain: Socioeconomic Factors and Consequences." The Journal of Bone and Joint Surgery, Inc. Print.



According to OSHA, MSDs account for \$1 out of every \$3 spent on workers' compensation claims.

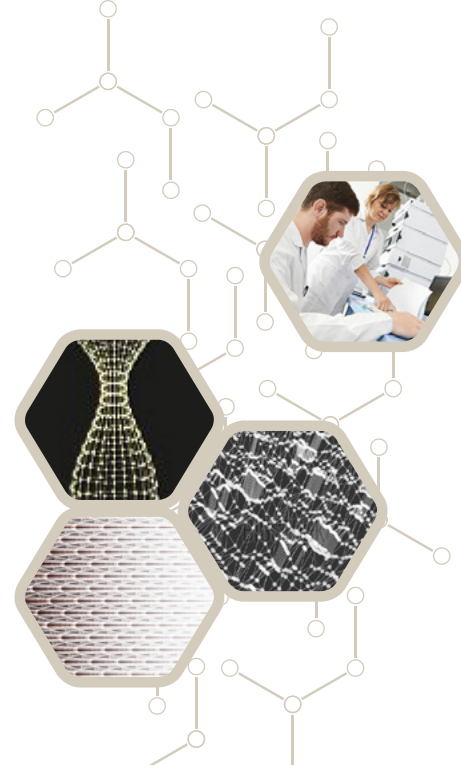


Tackling ergonomics issues is an important step to shoring up your bottom line and securing a healthy workplace for your employees. But managers must be wary. Not all ergonomics fixes are the same, and addressing MSDs without the proper guidance can present problems of its own.

This e-guide describes the vital difference between mass-produced ergonomic quick-fixes and certified professional consultants, and will show you how to select the best ergonomics professionals to help you achieve a sustained level of efficiency and safety.

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ALL ERGONOMICS FIXES ARE **NOT** CREATED EQUAL

How often have we heard of inexpensive gadgets that claim to relieve sore backs or aching wrists— treadmill desks or specially molded chairs? Maybe we buy them. We set them up. We use them for a while, until, inevitably, we find them years from now gathering dust in the corner of our office closet. And we think, Oh, I remember that. That didn't work at all.

The unfortunate truth is that products like these pervade the ergonomics industry. But this is not true ergonomics. Blindly applying a generic solution when the root cause of the issue is not understood will rarely result in positive outcomes, and may even make the problem worse.

When looking to invest in ergonomics solutions, do not confuse what some have called “voodoo ergonomics” for the real thing, and be sure your ergonomist does not rely on such practices.

AS YOU WILL SEE, REAL SOLUTIONS ARE ONLY ATTAINED THROUGH PROFESSIONALS WHO CAN LEVERAGE SCIENTIFIC KNOW-HOW AND YEARS OF ACADEMIC AND REAL-WORLD EXPERIENCE TO ASSESS YOUR WORKPLACE AND CUSTOMIZE PROCESSES FOR YOU.

“Voodoo ergonomics is a smokescreen of unsuccessful products and advice offered to companies with real problems . . . When companies apply this ergonomic voodoo, their workers may actually be worse off than they were before.”²

—Ergonomist Ian Chong

²Ergonomics Inc. Voodoo Ergonomics. 2001-2015. 8 May 2015.

TRAINING AND EDUCATION

Anyone can say they “do ergonomics,” but not everyone has the credentials to back it up. Just as you wouldn’t allow someone on the street to operate on your spine, you shouldn’t allow anyone but a professional ergonomist to assess your workplace.

Be sure that the ergonomists you select are certified professionals whose histories offer a blend of academic scholarship and workforce experience. The best way to ensure this is to verify your ergonomists’ certifications. A Certified Professional Ergonomist (CPE) will have been granted certification from the Board of Certification in Professional Ergonomics, and will have:

- demonstrated at least three years of experience in ergonomics,
- attained at least a bachelor’s degree in the field,
- passed a comprehensive, three-hour exam,
- and submitted work to verify his or her expertise.³

If you are serious about correcting problems at your workplace, then hiring ergonomists who have been certified by BCPE is a vital first step in the process.

If you are wondering about an ergonomist’s certification, you can search the [BCPE Directory](#).



³Board of Certification in Professional Ergonomics. How to Certify. 2015. 9 May, 2015.

IT'S ALL IN THE **APPROACH**

As we all know, the way we approach a problem has a lot to do with solving it. The right approach opens doors we may never have considered, while the wrong approach shuts them just as quickly.

Our bodies, and the environments we operate in, are intricate systems, so it's important that the ergonomists you choose adopt a systems-oriented view. Unlike one-size-fits-all products, a good ergonomist understands that many factors contribute to MSDs—which is why the pseudo-ergo gadgets mentioned earlier don't always work. A lot depends on how a chair or tool is being used, and on who is using it.

True ergonomics solutions are grounded in measurable, data-driven science. This quantitative approach is the only way to objectively identify and address the root causes of MSDs.

EQUIPPED WITH VALIDATED TOOLS AND TECHNIQUES TO QUANTIFY THEIR WORK, THE RIGHT ERGONOMISTS WILL APPLY A SYSTEMS-BASED METHOD WHEN ANALYZING YOUR WORKPLACE, ALLOWING THEM TO PINPOINT ALL THE CONTRIBUTING VARIABLES AND DESIGN EFFECTIVE, CUSTOM SOLUTIONS.



To correctly identify and address MSDs, ergonomists must consider...

PERSONAL FACTORS	PSYCHOSOCIAL FACTORS	BIOMECHANICAL FACTORS
Age and Gender	Stress	Loads placed on the body
Body Weight and Genetics	Mental Workload	Effects of motion



RESEARCH AND EXPERIENCE

Unfortunately, when many people think of ergonomics, they think simply of improving posture or being aware of body mechanics while lifting. This leads them to assume they can correct ergonomics problems on their own, which is not only unwise, but dangerous.

UNDERSTANDING ERGONOMICS, LIKE ANY DISCIPLINE, IS COMPLICATED, AND THE RIGHT ERGONOMISTS DO NOT JUST HONE THEIR SKILLS IN CERTIFICATION COURSES. THESE PROFESSIONALS WILL BRING INVALUABLE EXPERIENCE FROM OTHER CAREERS AS DIVERSE AS ENGINEERING AND REHABILITATION, AND WILL HAVE GAINED DIRECT UNDERSTANDING THROUGH YEARS OF WORKING IN ERGONOMICS. WATCHING SOLUTIONS BE APPLIED IN VARIOUS ENVIRONMENTS IS CRUCIAL TO DEVELOPING A FIRSHAND KNOWLEDGE OF THE TOOLS AND TECHNOLOGIES USED TO CUSTOMIZE SOLUTIONS.

Along with these tools, the right ergonomists will have continuous research experience in order to stay up to date on current science and to gather quantifiable data. After all, the systems information needed for proper ergonomics analyses and solutions must come from somewhere.



"[Ergonomics] needs both the breadth and richness of these professional backgrounds as well as the education and training in the unique technology of human factors/ergonomics."⁴

—Dr. Hal W. Hendrick

⁴Hendrick, Hal W. "Good Ergonomics is Good Economics." Proceedings of the Human Factors and Ergonomics Society 40th Annual Meeting, Santa Monica, California. 1996.

ABOUT THE OHIO STATE UNIVERSITY'S SPINE RESEARCH INSTITUTE

Certified professional ergonomists at the Ohio State University's Spine Research Institute are devoted to reducing the physical and financial suffering that stem from MSDs.

The objective tools and techniques developed by our ergonomists are backed by over 30 years of groundbreaking scientific research, as well as effective, customized solutions in an array of industries, including retail, medical, and automotive manufacturing.

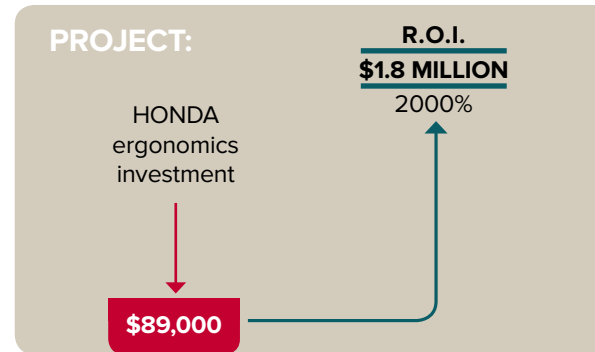
To thoroughly understand MSDs and develop the best solutions for our clients, we have established a comprehensive research program where cutting edge technologies and data-driven results inform solutions. In our laboratory, we have the ability not only to gather data for research purposes but also to test our systems-oriented solutions before ever executing them in the workplace, saving time and money without reducing workflow. Our longstanding experience, state-of-the-art research, and devotion to quantitative analysis, has led us to create safer, more efficient workplaces at more than 70 companies, including the National Cash Register Corporation and Honda Manufacturing of America.

⁵Forbes reference: https://spine.osu.edu/sites/spine.osu.edu/files/uploads/Media/Print/2007_ManVsMachine_Forbes.pdf.



<https://spine.osu.edu>

On one process/project alone (door assembly line), the SRI helped Honda turn an \$89,000 ergonomics investment into \$1.8M in savings over 5 years, an ROI of over 2000%. In total, the SRI has helped Honda reduce lost time due to injury by more than 70%.⁵



Since 1982, the SRI has published more than 200 peer-reviewed articles and had its findings cited over 12,000 times.