

The Cost Of Workplace Stretching Programs

Ann Arbor, MICH - [Humantech](#) [1], Inc. recently published an article titled, *What is the Cost of Your Workplace Stretching Program*, in their monthly e-newsletter, the [ErgoAccelerator](#) [2]. According to Blake McGowan, Managing Consultant and Ergonomics Engineer at Humantech, the cost of implementing a stretching program for a medium-sized manufacturing facility can range from a whopping \$390,000 to \$1,365,000 (see [calculations](#) [3]). Remarkably, the benefits of stretching to reduce work-related musculoskeletal disorders (WMSDs) in the workforce have been unfound.

Most safety professionals assume or advocate that site-wide stretching programs benefit employees, thus reducing WMSDs. However, the effectiveness of such programs has been questioned and researched.

In 2003, Hess and Hecker conducted a review of research related to stretching at work for injury prevention. Based on the three best-known studies they reviewed, stretching did not result in any meaningful or statistical reduction in WMSDs.

Furthermore, there has been a tremendous amount of research on stretching and injury reduction in sports. Surprisingly, the results have been similar and the findings are listed below.

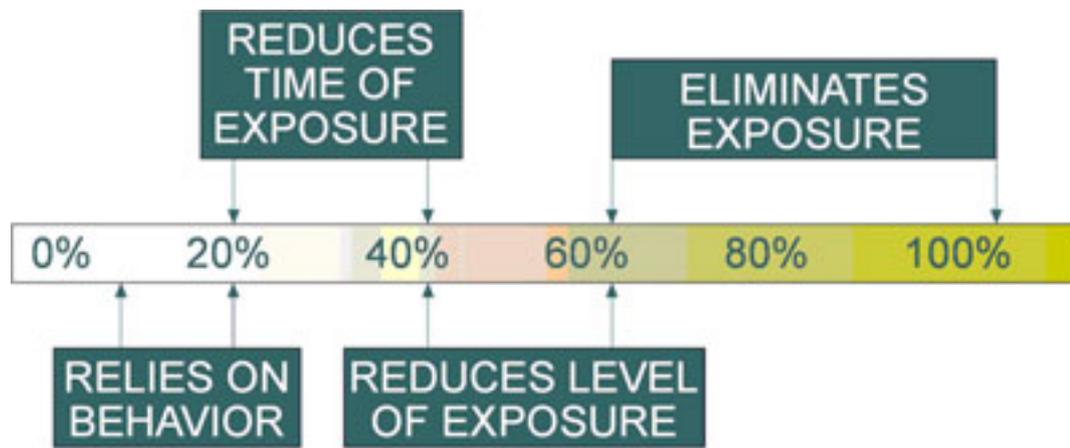
- Static stretching prior to an athletic event will decrease muscular power (Marek, S.M., et al., 2005), torque (Evetovich, T.K., et al., 2003), maximum force output (Bacurau, R.F., et al., 2009), vertical jump height (Young, W. and Elliott, S., 2001), sprint speed (Nelson, A.G., et al., 2005), agility (McMillian, D.J., et al., 2006), and maximal strength for up to 1 hour (Fowles, J.R., Sale, D.G., and MacDougall, J.D., 2000).
- Static stretching prior to an athletic event will lower endurance performance and increase the energy cost of running during a 30-minute run (Wilson, J.M., 2010).

In 2004, Thacker, et al., completed a systematic review of the literature related to the impact of stretching on sports injuries. They conclude, *"There is not sufficient evidence to endorse or discontinue routine stretching before or after exercise to prevent injury in competitive or recreational athletes."*

More recently, in 2009, Goggins, et al., completed an exhaustive review of the literature related to case studies that reported benefits of ergonomics programs and control measures. The researchers proposed the following relationship between ergonomic controls and the estimates of effectiveness (based on results from case studies).

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Published on Industrial Maintenance & Plant Operation (<http://www.impomag.com>)



R.W. Goggins et al. / Journal of Safety Research 39 (2008) 339-344

The image illustrates that controls that rely on behaviors, such as site-wide, workplace stretching programs, have limited overall effectiveness (5 to 20 percent). Coupled with the fact that there is no meaningful or statistical reduction in WMSDs associated with site-wide, workplace stretching programs, it seems that the benefit of the financial investment is marginal, at best.

According to McGowan, "To reduce or eliminate exposure, effective ergonomic practices need to be addressed. Risk factors need to be quantified and the root causes need to be identified. By using engineering controls, practices and methods it is then possible to reduce or eliminate the exposure." This method appears to have a greater effectiveness, both from a cost and risk reduction perspective, he says.

Some engineering improvements, on a per project basis, could cost pennies compared to a stretching program. For instance, purchasing new tooling can range from \$100 to \$300, improved workstation design can cost up to \$1000, and material handling devices can cost up to \$5000. There are a lot of workstation improvements that can be implemented for little money, i.e. repositioning part bins to prevent overextending or twisting body positions, adjusting the height of the workstation so that the user is aligned properly, changing the orientation and position of control buttons on machinery, or providing carts to move heavy loads can all have meaningful impacts.

You decide how your money is spent. If you want to know the real costs involved in your workplace stretching program, see the [calculations](#) [3] referenced by the article. It is up to you to determine if the value is worth the dime.

For over 30 years, global companies have relied on Humantech for workplace improvements. By combining the science of ergonomics and our unique 30-Inch View®—where people, work, and environment intersect—we deliver practical solutions that impact safety, quality, and productivity. At Humantech, we believe people make productivity happen. For more information about our portfolio of products and services or the 30-Inch View, visit www.humantech.com [4].

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