

WORKSITE STRETCHING PROGRAMS by Jennifer McGillis

Stretching programs at worksites are often a discussion point with the employer as a means to improve the overall health of their workforce, increase the ability of employees to perform work and improve workplace morale. There has been significant research in this area to determine the benefits to both employers and employees and this article will strive to summarize some of those findings.

The concept of creating and implementing a stretching program is directly related to the perceived benefits, which include:

- Minimizing discomfort and pain
- Improving muscular performance
- Increasing muscular flexibility
- Improving range of motion

The research mostly supports these findings, suggesting that workplace stretching programs do in fact increase flexibility and increase perceptions of self-perception and self-worth (Moore, 1998). However, research regarding the reduced frequency and cost of injuries due to stretching programs is inconclusive, suggesting that in some cases companies have seen reductions but in others little to no effect was observed.

In addition, there may be other fringe benefits associated with implementing a stretching program such as potential to enhance workplace morale and safety culture. Both of these are associated with the belief that the employer is trying to improve workplace safety and help employees be more comfortable at work.

The literature has primarily focused on two specific types of stretching programs; those designed for computer users and programs meant for manufacturing-type environments. The following summarizes the findings for each:

Stretching Programs for Computer Users

Guided stretching programs that either interrupt work (force the employee to wait while the stretching program runs) or passively remind office employees to stretch throughout the day (allow employees to escape out of the program and continue working) have experienced some popularity; however, their usage has decreased over the past several years, likely due to mixed feedback. Examples of such programs include: Stretchware and WorkSafe Sam.

The purpose behind these programs is to take employees through a guided stretching program that is directly related to the issues typically identified by office workers (i.e. hand/wrist, shoulder and neck discomfort).

Overall, research findings indicate that these programs do have a positive impact on symptom reduction and increase in productivity for those employees that reported using it—though voluntary compliance (i.e. employees could cancel out of the program without completing it) led to decreased participation (Henning et al., 1997). Other benefits that have been documented were an increased awareness of discomfort and general office ergonomic set-up (Saltzman, 1998).

Stretching Programs for Manufacturers

Unlike stretching programs for the office, typically manufacturing environments use mandatory stretching programs; all employees participated in the program at a regular time throughout the day (i.e. before shift start and/or after lunch break). This style of program had almost 100% compliance and the studies found that

flexibility was increased, physical self-perception was increased and there were reduced incidences of musculoskeletal disorders (MSDs) (Amako et al, 2003, Hartig & Henderson, 1999, Hilyer et al, 1990).

One study looked at the cost benefit analysis on employees who participated in the stretching program and those that did not and found that there was a 275% increase in injury costs for non-stretchers as well as a 324% increase in time-loss costs (Hilyer et al, 1990). Although these numbers seem incredible, it is important to note that this study was only focused on one work area, and cannot be considered a good representation of what might occur at all worksites.

Developing a Stretching Program

In order to address the needs of your employees and create a sustainable program, the most effective programs follow this type of development process:

Determine the physical demands of the job

To ensure your program addresses the physical discomforts your employees are experiencing, it is important to thoroughly understand their discomfort as well as the physical requirements of the job(s). The most effective way to do this is to complete a Physical Demands Assessment (PDA) that documents the bona fide essential duties of the job(s). For use in stretching program development, the PDA should specifically document postural requirements including working heights/reaches and joint angles required to do the job and the duration of these movements.

The information gathered in the PDA will help to identify which stretches are going to give your employees the greatest relief from their symptoms.

For example, an employee who does a small assembly task that requires fine detail work will likely benefit from extensive hand/wrist and perhaps shoulder stretching whereas an employee working on large parts that requires a lot of mobility and/or bending, reaching and twisting may benefit more from lower limb and back stretches.

The goal should be to create balance in the muscle by stretching in the opposite direction to the work being performed (i.e. performing a counter stretch). If an employee spends a large part of their day hunched forward they do not need to do forward bends; instead, they need to do back extensions.

Warm up and cool down

Stretching cold muscles and/or letting employees walk away directly after stretching with no cool down period can be problematic. Cold muscles are not always ready for physical activity and this can cause injury. Simple warm ups like marching in place can increase muscle warmth to mitigate this effect.

An important point to keep in mind is that not all employees should stretch. Some individuals with injuries or other health related issues may need to refrain from the program (at least temporarily) to ensure they are not aggravating previous or existing injuries. Research has also shown that for individuals who are hyper-flexible, stretching may actually increase their risk of injury by decreasing their joint stability.

In summary, stretching programs can be an effective tool in managing and minimizing injury risk when used properly. Any stretching program should be specific to the jobs

and tasks within that department, specifically addressing the movements associated with each. That said, stretching initiatives should not replace a more comprehensive program. Ideally, you should start by making any ergonomic changes/improvements that you can to reduce risk and use a stretching program to mitigate the residual risk that is present.

Anecdotal evidence from various companies who have (or used to have) stretching programs is also quite varied. Some companies have seen great success with the programs and other companies' programs have waned over the years due to lack of sustainability and decreased compliance.

The programs that seem to be the most sustainable are ones in which the employees have taken ownership (i.e. they were featured in the development of the program, team leaders lead the stretches each day, actual employees are featured in the video session, etc.). The more they feel it directly benefits them and they have ownership over the program, typically the more success it will experience.

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