

About Sit-Stand Workstations

Workplace Safety & Health | Ergonomics

As research continues to link sedentary lifestyles to various health risks, many researchers agree that people need to MOVE. In the workplace, this raises a potential consideration for employees in traditionally sedentary jobs. Should these workers sit, stand, or alternate between the two during the work day? Do sit-stand workstations offer a viable option? Are they beneficial for promoting more movement and wellness in workers? Should they be a consideration for companies who care about the safety and well-being of their employees or are they just a trend?

The Biology of Sit-Stand

Static positions have been associated with adverse health, whether seated or standing. A 2015 study reported in the *Annals of Internal Medicine*¹ suggests that sitting for prolonged periods increases the risk for heart disease, diabetes, cancer and death, even among people who exercise regularly. Research also has identified adverse health due to prolonged standing, including, but not limited to increased foot and lower back pain, discomfort, and fatigue^{2, 3} and increased risk of chronic vascular disorders^{4, 5}.

Sit-stand workstations are thought to offer a solution to static postures by promoting postural change. This change can help reduce pressure on the lower back by alternating between sitting and standing. Some research suggests that sit-stands provide several health benefits, including, but not limited to:

- decreasing employee discomfort
- reducing risk of cardiovascular disease^{6, 7}
- decreasing risk for musculoskeletal disorders⁸
- decreasing discomfort^{8, 2}
- increasing the amount of calories burned while at complete rest⁷
- Users who cannot sit more than 30 minutes or whose job duties do not allow for movement (e.g. call center users) could be considered for a sit-stand workstation⁹. Users who have no medical need, engage in neutral postures at their workstation, and are capable of moving away from their workstation frequently, could have less necessity for a sit-stand.

Use of and Training in the Sit-Stand Workstation

Appropriate usage of the sit-stand workstation is key in its potential benefits. According to research, working at a sit-stand workstation without individualized standing and seated height alignment could expose the potential for poor posture. The sit-stand workstation must be appropriately adjusted to accommodate the worker's body while working in both positions. For example, when adjusting the desk from the seated to standing position, the monitor(s) needs to be adjusted to the appropriate height to reduce the risk for awkward neck posture¹⁰. Similarly, keyboard and mouse height should allow for a relaxed, neutral shoulder, arm, and wrist position.

Proper training must accompany any sit-stand installation to help ensure the equipment is set up and utilized appropriately. Training should be provided to users before utilization of a sit-stand workstation to help ensure correct use of the workstation. Training should also focus on neutral postures, proper workstation setup, and risk factors associated with sitting and standing, otherwise the benefits may be lost. In fact, improper use could put the user at risk for an ergonomic injury, such as tendinitis. Overall, training is key.

Sit-Stand Workstation – Types and Cost Considerations



Figure 1: Sample Sit-Stand Workstation
(with permission from HumanScale)

To accommodate varying ergonomic, economic, and furniture needs, several types of sit-stands have been designed. Sit-stands can sit on a desk top, be free standing with manual adjustments (Figure 1), or be free standing with electronic controls. Typically, electric sit-stands have the greatest height adjustability, ranging from 22 to 49 inches. Sit-stands are intended to accommodate a large portion of the population.

The costs associated with purchasing a sit-stand depend on type. Sit-stand workstations that are operated by a hand-crank generally cost less than those powered by electricity or pneumatics. After purchase, additional costs include installation, training, maintenance, power supply, and energy consumption.

Although cost concerns may exist with sit-stands, some equipment and space-related cost justifications may also exist. With a continuing mobile workforce, properly adjusted sit-stand workstations can accommodate multiple workers, allowing employers to purchase a single workstation for multiple employee use. Furnishing fewer desks may result in purchase and installation/bracketed desk adjustments cost savings and reduced floor space requirements¹¹. The actual cost benefit on health, productivity and return on investment, however, can be somewhat confounded by the fact that, according to research, only 1 in 10 workers with a sit-stand workstation use the sit-stand feature on a daily basis¹¹.

Alternative Ways to Move

Some companies may not have the funding to purchase sit-stand workstations, and may look for alternative ways to reduce sedentary time during work hours. Alternative considerations for increasing worker movement include:

- Implement standing or walking meetings.
- Install stand only tables in huddle/breakout rooms.
- Move printers and trash cans to one designated area on the floor.
- Schedule break reminders throughout the day.
- Take advantage of wellness programs (fitness centers, wearable devices, etc.).
- Provide users with stretches appropriate for their job tasks.

Privacy Concerns

With the current trend in open office floor plans, installing a sit-stand can be troublesome due to privacy and information security concerns. Individuals who work with sensitive or confidential information, or individuals who sit by those who do, may need to pay close attention to the visibility of their computer screen as the desk is adjusted to various heights. Solutions to privacy concerns can include refraining from the stand function when important information is visible or installing a privacy screen. Standing could also influence vocal projections. Individuals who frequently speak on the phone should be mindful of the potential for others to be distracted by loud volume if they are standing and speaking in an open environment.

Get Up and Get Moving¹²

Both static sitting and static standing can have a negative impact on the body and health. Whether in the form of a sit-stand workstation or an alternative method, most researchers agree that light activity throughout the

workday is an effective way to help reduce static discomfort and clear the mind. Integrating movement into your daily routine can have a positive impact. Get up and get MOVING!

References

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To help improve comfort and reduce the effects of sitting in one position all day at your desk, consider performing these stretches.

Related links

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- Comfort Tips for Standing Computer Users (Standing Workstations)
- Comfort Tips for Computer Users (Home Office and on the Road)

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