

The last several years have witnessed a spike in interest of standing workstations, particularly in the office setting. This interest has been driven by headlines declaring “sitting is the new smoking” and studies identifying prolonged sitting resulting in sitting disease and metabolic syndrome, leading to a plethora of health conditions and being instrumental in the increasing obesity epidemic in the United States. Despite contradictory studies regarding the health impact of sitting, there is little doubt that the office environment of today most often is a setting where people sit for prolonged periods of time and for the majority of their workday. To that end, standing workstation options have gained acceptance as an alternative to a sedentary posture.

But are standing workstations the panacea to the sitting issue? Standing burns 88 cal/hr compared to 80 cal/hr in sitting, a negligible difference. A 12 year study of 7,300 heart-disease free workers in Ontario, Canada showed that those who primarily stood were twice as likely to have heart disease as those who primarily sat. The risk of heart disease remained the same even after adjusting for factors like age, education, health conditions and ethnicity. Heart disease risk may be increased by blood pooling in workers’ legs as well as by increased venous pressure in the body from trying to pump blood back up to the heart, which increases oxidative stress. Finally, standing may not be a good option for those with orthopedic problems affecting lower body joints, hips, or the back.

So, if sitting and standing both have their pitfalls, what is the solution? **The solution is to promote more movement via an active office environment.** “The best posture is the next posture”, a popular refrain among ergonomists, refers to the need to frequently **change postures and move**. Standing workstations can be a component of an active office, but should not be considered the only alternative to sitting.

The goals of an active office include:

1. Frequently interrupt sitting time
2. Engage the legs to stand, walk, and move more frequently
3. Create a culture of activity
4. Provide tools and equipment to support standing postures

Characteristics of an active office may include:

<i>Activity Campaigns: Take the Stairs, Remote Parking, etc.</i>		<i>Conference rooms with tall tables and no chairs</i>		<i>Walking meetings with delineated walking paths and participant lanyards</i>	
<i>Central printing and trash</i>	<i>Standing for phone or on-line meetings/conference calls</i>	<i>Standing meetings</i>		<i>Encourage stretching routine 2-3 times/day</i>	
<i>“Micro breaks” (30-60 seconds every 45-60 minutes)</i>		<i>Encourage face to face discussion vs. Instant Messaging</i>		<i>Discourage emails to peers in close proximity</i>	
<i>Stand up workstations/accessories</i>	<i>Shared walking stations</i>	<i>Smaller cups for workstation beverages</i>		<i>Identify stand up opportunity tasks</i>	

Sit/Stand Workstation Considerations

As previously noted, the goal in today's offices is to encourage movement. Movement and changes in posture can be achieved in many ways. Good seating and proper ergonomic set up is key. Sit/stand workstation are simply one element of an active office environment. Following are some considerations when contemplating sit/stand workstations as an option.

Who should have a sit/stand workstation?

Responding to requests and determining when and how to deploy sit/stand workstations should be a formal company policy. Not everyone needs a sit/stand workstation. In reality, most workers do not understand how to properly adjust/set-up their existing seated workstations/chair. Education on proper posture and workstation adjustment will help manage many discomfort issues.

Considerations impacting the decision to provide sit/stand workstations include:

- Existing medical conditions that may or may not allow the user to stand for extended periods
- Jobs/tasks requiring precision control of the hands are better performed sitting
- An ideal candidate for sit/stand workstation option is someone that is primarily required to work from their computer/phone at their desk and can't easily include regular movement within their workday
- Treat ADA/ADAAA requests separately from standard ergonomic evaluation results
- Requiring a physician note will likely only result in more doctor's visits
- Some companies will deploy them for the "feel good factor"
- May be more of an engagement issue than an ergonomics issue
- Individual workstations or shared/hotel-style workstations

Stand Capable Workstation Options

There are a variety of workstations that will allow a user to work from a standing position. Each option represents differing degrees of cost and implementation complexity. Below is an explanation of the three most common options.

- Height Adjustable Work Surface (Sit-to-Stand) – These installations involve a workstation where the entire work surface can be raised and lowered to accommodate sitting or standing. Height adjustability mechanism can vary from a manual crank or counter-balanced spring or pneumatic lift assist to an electrical motor powered adjustment mechanism with height programmable set ups. These are adjustable and can be adapted to both seated and standing heights. Adjusted by the user. Cost: moderate to high. Installation complexity: moderate.
- Standing Workstation (or Stand Biased Workstation) – These installations involve a work surface of fixed height that is appropriate for a specific standing user. Installations will be supplemented with a "high" chair thereby allowing the user to stand or sit simply by stepping off the chair. Neither chair nor work surface need to be adjusted once they are set up. Cost: moderate. Installation complexity: moderate.
- Sit-to-Stand Desktop – These devices are designed to be placed on top of an existing fixed height work surface. The device holds the keyboard and monitor and can be adjusted to accommodate a seated or standing user. The adjustment is manual and assisted by either pneumatic or mechanical (spring/counterbalance) mechanisms. Cost: low to moderate. Installation complexity: low.

Tips for Success

It is not uncommon for employers to deploy standing options for workers, only to find that the vast majority of workers are back to a predominately sitting posture within a 2-3 month period. In order to help ensure success of a sit-to-stand campaign, the following are recommended:

- Ergonomics Training/Education - Ensure that workers understand proper ergonomics and the value of neutral postures and frequent movement
- Movement – Encourage workers to sit for 20 minutes, stand for 8 minutes, and move or gently stretch for 2 minutes out of every half-hour. Over a 7.5 hour day, that equates to:
 - 5 hours of sitting
 - 2 hours of standing
 - 30 minutes of moving
 - 16 sit-to-stand transitions
- Ease of Use - Avoid desks that are slow, noisy, or otherwise inconvenient to adjust.
- Ease Into It – Slowly increase standing time vs. sitting time.
- Foot Rest – Provide a footrest and encourage users to alternately raise a foot and rest it on the elevated surface while standing. This helps alleviate sustained muscle exertion in the lower back.
- Encourage comfortable shoes and/or use of gel insoles.
- Understand that if there are only a few workers standing, it can create awkward situations with regard to noise, self-consciousness of the standing worker to his/her voice carrying across the office, or one worker being the “center of attention” or looking over cubicle walls at co-workers. Be prepared to address these issues with flexibility of location and/or ability to provide white noise or visual/sound barriers or partitions between workers when necessary.