

## Research Brief: Posture Change in the Office Environment

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There is ample evidence that most of us should sit less and increase our daily physical activity. Prolonged sitting at work has been recognized as a factor that increases the risk of developing poor health. The suggestions in this brief address ways to increase posture changes and activity that are within your control while at work.

### Get Up and Move

The office work environment lends itself to movement. The expanses and quiet nooks in the workplace are perfect areas to walk or set as destinations. Walking is one of the best ways to halt the negative effects of being sedentary.<sup>1</sup> Getting out of the chair to stand at work is a great way to change posture that is best achieved with a sit-to-stand desk, and perhaps a sit-stand stool and an adjustable monitor arm. Keep thinking steps and posture change as you progress through your workday.

A combination of sitting and standing has been shown to reduce discomfort and the long-term health detriments of being inactive during the day.<sup>2</sup> People who stand during a portion of their workday also experience an improvement in performance and mood.<sup>3</sup> The optimal schedule for changing between sitting and standing has not been established scientifically. Research has shown that there are limits where the benefits of standing no longer accrue. The latest research suggests that you keep total standing time at work to four hours or fewer.<sup>4</sup>

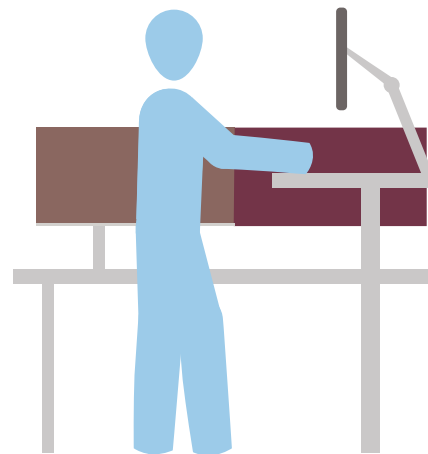
### Maximize the Benefits of a Sit-to-stand Worksurface

These recommendations lay out a plan for using a sit-to-stand worksurface.

- Begin standing in sessions that last 15 minutes or fewer. Wearing low-heel shoes will be much more comfortable than high heels.
- Increase each session length by five or ten minutes after three or four days if standing and working is not causing discomfort. Be aware that some people experience low back pain when standing in place for

25 to 30 minutes. If you find yourself in this group, your personal plan should be to return to sitting (or another activity) prior to the onset of discomfort.

- Increase your standing time to a point that is comfortable for you. Standing for an hour is great but try not to let a session of standing go beyond two hours.



- Ergonomic practices are still important when standing at work.
  - The display, keyboard, and mouse should be raised to position them in zones that encourage good posture.
  - The top of the viewable screen should be just below your eyes to keep a neutral neck posture.
  - The keyboard and mouse should also be high enough and close enough to maintain flat wrists with both elbows close to your torso.
- Be mindful of the viewing distance to your computer screen. If you use a sit-stand stool or work in a reclined posture (while sitting), you may need to bring the display closer to your eyes while in these positions.

1 Swartz et al., 2011.

2 John et al., 2015; Goodman et al., 2012; Pronk et al., 2009.

3 Robertson et al., 2013.

4 Callaghan et al., 2015.



- Remembering to get up and stand while working can be difficult for some people. One suggestion is to adjust your desk for standing after you return from a meeting, lunch, or even a restroom break.
- Suggest to your friends and colleagues that they, too, should get more active in the workplace. It is easier to begin and maintain new activities when those around you have similar goals.

- Before beginning tasks that require uninterrupted thinking, or when you don't need a desktop computer, walk to a quiet space for solitude or seating in an open area to check email.

### Stand Wherever You Work

Change your posture throughout the day by varying standing and sitting. Here are some recommendations for varying your routine.

- Stand during meetings.
- Stand while reading email or long paper articles, talking on the phone, or adding details to a new concept you've been working on.
- Stand and stretch in your workstation between tasks.



### Getting Extra Steps

Don't underestimate the benefit of getting up and walking—every step you take helps your body maintain proper metabolism. An important aspect of standing and getting steps is that you need to distribute this activity throughout the day: It has to happen more than once in the morning and once in the afternoon. There are lots of ways to keep active at work.

- Stretch out that walk to your meeting. Even walking for a few minutes can help clear your mind and make you feel more energized. Take a little longer route back to your desk as well.
- Occasionally get up and walk to your coworker's desk rather than call, email, or text message.

- Consider walking during one-on-one meetings, stopping to make notes on a mobile device when necessary.
- Anytime that you feel your productivity is slipping is the right time to take a brief walk or switch your working posture.
- Use some of your lunch break to take a short to medium length walk.

Increasing posture changes and moving at work are good for everyone to reduce the risk of poor health. For more tips on good office ergonomics practices, refer to the [Ergonomic Desk Set-up Tips](#) interactive PDF.

## References

Callaghan, J. P., De Carvalho, D., Gallagher, K., Karakolis, T., and Nelson-Wong, E. Is standing the solution to sedentary office work? *ergonomics in design*, 23(3), (2015): 20-24.

Dababneh, A. J., Swanson, N., and Shell, R. L. Impact of added rest breaks on the productivity and well-being of workers. *Ergonomics*, 44, (2010): 164–174.

Goodman, G., Kovach, L., Fisher, A., Elsesser, E., Bobinski, D., and Hansen, J. Effective interventions for cumulative trauma disorders of the upper extremity in computer users: Practice models based on systematic review. *Work: A Journal of Prevention, Assessment and Rehabilitation*, 42, (2012): 153–172.

John, D., Lyden, K., and Bassett, D. R. A physiological perspective on treadmill and sit-to-stand workstations. *ergonomics in design*, 23(3), (2015): 14-19.

Pronk, N. P., and Kottke, T. E. Physical activity promotion as a strategic corporate priority to improve worker health and business performance. *Preventive Medicine*, 49, (2009): 316–321.

Robertson, M. M., Ciriello, V. M., and Garabet, A. M. Office ergonomics training and a sit-stand workstation: Effects on musculoskeletal and visual symptoms and performance of office workers. *Applied Ergonomics*, 44, (2013): 73–85. doi:10.1016/j.apergo.2012.05.001.

Swartz, A. M., Squires, L., and Strath, S. J. Energy expenditure of interruptions to sedentary behavior. *International Journal of Behavioral Nutrition and Physical Activity*, 8(1), (2011): 69.

## Source

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