

# **Sit/Stand Workstations**

FACT SHEET 88-024-0318

#### Introduction

The human body was designed to move. Sedentary behavior, a side effect of long duration computer use, can lead to a loss of worker health, increased costs associated with worker injuries, and a decrease in mission readiness. Good ergonomic practice dictates frequent position changes, such as leaving your workstation at least once an hour for 5-10 minutes. A sit-stand workstation encourages movement<sup>1</sup> and is part of the evolution of the computer work environment.



# Moving and the effect on risk of illness

Studies have shown that:

- On average, office workers sit for 77% of the day<sup>2</sup>.
- Prolonged sitting increases risks of cancer, cardiovascular disease, Type II diabetes, and is a suspected risk factor in musculoskeletal disorders<sup>3</sup>.
- Prolonged standing is associated with low back pain, sore feet, swelling of the legs, varicose veins, and other health problems<sup>4</sup>.
- Exercising regularly before or after work does not eliminate excessive sitting risks. Short, regular breaks from sitting can be beneficial for workers' health<sup>3</sup>.



Alternating between sitting and standing can reduce pressure on the back's vertebrae, increase circulation to the legs and decrease lower back pain. A well designed and fitted sit-stand workstation promotes these health benefits, and incorporates:

- Height ranges to accommodate most workers.
- Easy adjustability to encourage changes to posture throughout the day.
- Easy to reach locations for work equipment such as phone, documents, and other items.
- Options for installation that meet the needs of the specific workstation design.

These design features can be accomplished through:

adjustable desk, keyboard tray with at least a 12-inch vertical range of motion, monitor arms, sit-stand workstations attached to standard desk surface, and, if appropriate, wireless keyboards and input devices. While in the standing position, proper footwear and/or an anti-fatigue mat is encouraged.

### Do I need a Sit-Stand Workstation?

- If you experience little or no leg or back discomfort, have a job that requires you to frequently leave your desk during the course of the day, or have flexibility in your work schedule to leave your desk when you want, and are currently happy with your workstation design, then you are most likely not a candidate for a sit-stand workstation.
- If you currently experience difficulty sitting for 30 minutes or less, and have a job that keeps you sedentary, you are likely a candidate for a sit-stand workstation. We also recommend that if a sit-stand workstation is being purchased, that it is easy to adjust and encourages an individual to change positions frequently.

## **Return on Investment**

Case studies<sup>5</sup> have shown that after introduction of sit-stand workstations into the workplace decreases were seen in duration of sitting, number of work-related musculoskeletal disorders (WMSDs), lost workdays, turnover, absenteeism and workers' compensation costs.

The U.S. Army Public Health Center Ergonomics Program currently considers the best way to reduce discomfort and injury risk associated with excessive sitting is for healthy workers to work in a neutral posture while sitting (see the fact sheets "You Can Arrange Your Desk So That It's Right For You" and "Step By Step Set-up Of Your Office Chair"), intermittently stand and move around doing other activities such as making phone calls, getting coffee, and making photocopies, etc.<sup>6</sup>

## References

- Dutta, N., Keopp, G., Schmitz, C., Stovitz, S., Levine, J., Pereira, M. (2014). <u>The Effect of Sit-Stand Workstations on Physical Activity in Sedentary Office Workers: A Randomized Crossover Trial</u>. Int. J. Environ. Res. Public Health 2014, 11(7), 6653-6665.
- 2. Neuhaus, M, Healy G. N., Dunstan D. W., Owen, N., Eakin E. G. (2014). <u>Workplace Sitting and Height-Adjustable Workstations: A Randomized Controlled Trial</u>. Am J Prev Med 2014;46(1):30–40.
- 3. Hamilton, M., Healy, N., Dunstan, D., Zderic, T., Owen, N. (2008). <u>Too little exercise and too much sitting: Inactivity physiology and the need for new recommendations on sedentary behavior</u>. Current Cardiovascular Risk Reports, July 2008, vol. 2 no. 4, pp 292-298.
- 4. McCulloch, J. (2002). <u>Health risks associated with prolonged standing</u>. <u>Work.</u> 2002;19(2):201-205.
- 5. Kay, G. (2017). Evidence: Investing in Adjustable Workstations Produces Healthy ROI. <a href="https://ergobuyer.com/blog/evidence-investing-in-adjustable-workstations-produces-healthy-roi/">https://ergobuyer.com/blog/evidence-investing-in-adjustable-workstations-produces-healthy-roi/</a>. 18 Aug 2017 Ergobuyer. Originally published on ergoweb.com, August 2, 2011.
- 6. U.S. Army Public Health Center (2015), Information Paper, Sit-stand workstations. 26 October, 2015.