

Sit-Stand Workstations

What are the advantages to sit-stand workstations?

Sit-stand workstations are valuable for more than just comfort. There are numerous health benefits that go along with giving employees the option of sitting or standing throughout the day. Standing can alleviate stress on the soft tissues for employees that have chronic hip or low back pain. A Cornell University study found users that started working at a sit-stand workstation reported 28 and 33 percent reductions in low back and mid back

discomfort, respectively, compared to their seated workstation. In addition, a recent study in the American Journal of Epidemiology followed 123,000 adults over 14 years and showed that those who sat more than six hours a day were at least 18 percent more likely to die earlier than those who sat less than three hours a day. Another study showed that giving employees the option to stand during the day may help reduce the risk of heart disease.

What type of desks should I consider before deciding what type of sit-stand workstation is best for my employees?

What features should I consider before I purchase a sit-stand workstation?

1. Adjustable height desk

- **Electric adjustable desks** are fast and easy to adjust. Although more expensive, these electric desks are more likely to be adjusted by users on a daily basis. Since it is good for employees to alternate between sitting and standing several times throughout the day, this workstation would be ideal. Some electric height adjustable desks have memory settings that allow the user to set a preferred seated and standing height, which allows for one-touch adjustment between the two heights. This also increases the likelihood of daily use and ensures proper height adjustment each time.
- **Manual crank desks** are just that — manually adjustable, usually with a hand crank. This also provides employees with the option to sit or stand at their workstation, but it takes a little more time and effort to change the height.

Examples of height adjustable desks include:

- **BeyondTheOfficeDoor.com** — Electric and hand crank desks
- **GeekDesk.com** — Electric height adjustable desk with custom presets
- **Humanscale.com** — Float: Unique counter balance adjustable desk
- **NextDesks.com** — Electric and fixed height adjustable desks
- **MyUpdesk.com** — Electric and hand crank adjustable desks
- **WorkriteErgo.com** — Sierra: Electric and hand crank adjustable desks

2. Fixed standing height desk with task stools

If you have a modular furniture system — cubicle walls and desktops — you may want to consider raising the desks to a

standing height and provide a task stool to allow employees the option to sit down. However, this option will require the purchase of task stools which can cost as much as or more than a traditional task chair.

Examples of quality task stools include:

- **ErgoGenesis.com** — Bodybilt drafting chairs
- **SomaErgo.com** — Task chairs, most of which can be customized with extra tall cylinder and footing

Examples of height adjustable footrests include:

- **WorkRiteErgo.com** — Height adjustable footrest
- **OfficeRelief.com** — Kantek height adjustable footrest
- **Fellowes.com** — Height adjustable footrests

3. You should also consider a retrofit system. All of the height adjustable desks listed are meant to replace the existing desk, and generally range in price from \$750–1,750. If you're looking to keep costs down and keep your existing desk, a sit-stand retrofit system may be the best solution. These systems attach to the existing desk and typically use an electric motor or counterbalance mechanism to adjust the keyboard/mouse platform in conjunction with the monitor. These are priced around \$350–1,500 depending on the brand and add-ons. Only consider systems that have independent desk/keyboard platform and monitor height adjustments. **Examples of retrofit sit-stand systems include:**

- **Ergotron.com** — 18" of height adjustment with the ability to move the keyboard below desk height. Independent keyboard and monitor adjustments. Optional surfaces available.
- **ErgoDesktop.com** — Kangaroo Pro: 16.5" of height adjustment. Independent keyboard and monitor adjustments.
- **ErgotechGroup.com** — 20" of height adjustment. Electric lift. Independent keyboard and monitor adjustments.
- **Varidesk.com** — Various sizes and configurations that set on top of the desk. New Exec system adjusts up to keyboard/mouse 18" above desk height.

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What other factors should I consider when selecting a sit-stand workstation for my employees?

Height range adjustment: With any type of adjustable height system, the adjustment range is important. The desk should have enough height range adjustability to accommodate 95% of your worker population. That way employees can adjust components so they are working in both neutral seated and neutral standing positions. To accommodate 95% of the population, the height adjustable workstation or keyboard tray/monitor retrofit system should have an adjustable height range of at least 26" to 46½."

Footrest: It's also recommended that a footrest or foot rails be provided under the desk to allow for foot support. Also, if you have a standing height fixed desk and are providing task stools it's never a good idea to rely on the stool footring as the only foot support when seated since it forces the user to sit with their feet under the chair for long periods of time. This places unnecessary stress on the knees. The footrest will have to be taller than a traditional seated footrest. Consider a height adjustable footrest that will allow the user to use the same footrest while sitting in the stool or standing.

Task analysis: A thorough task analysis should be completed to identify any additional factors that would have a negative impact on standing work such as additional noise traveling over cubicle walls or limited desktop space if using a corner section sit/stand.

I've decided on a specific sit-stand workstation, what's next?

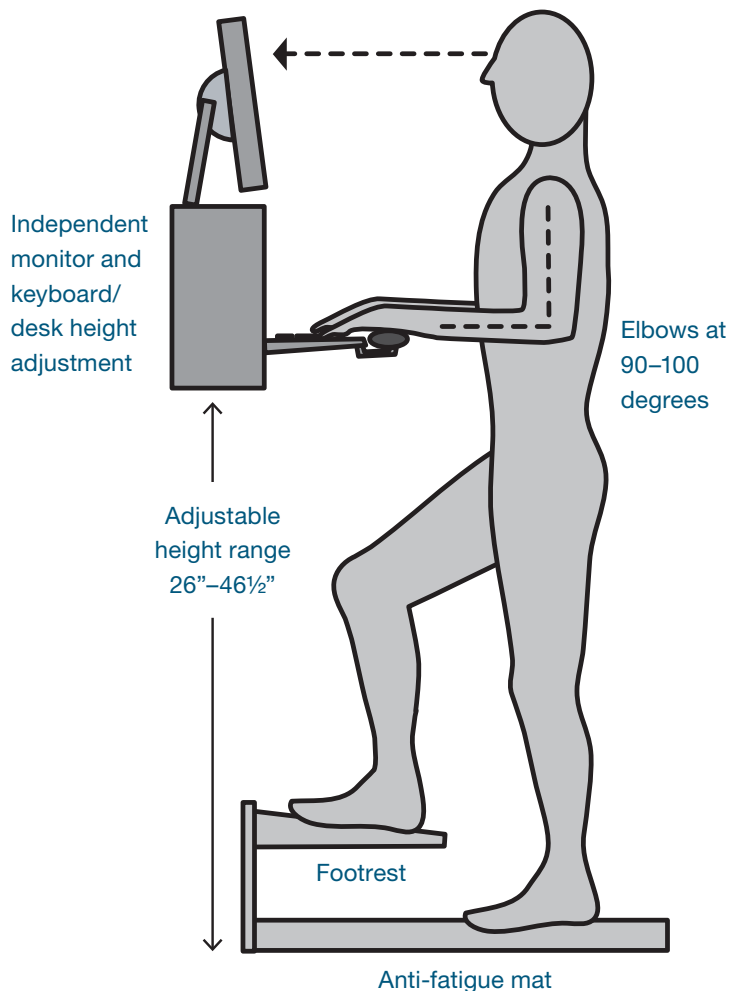
After you identify a couple sit-stand workstation options, install one of each so employees can try them before you make a final decision. Have your shortest and tallest employees work at the workstation in both seated and standing postures to ensure the system has adequate adjustability.

How long should employees stand continuously during a typical 8-hour day?

Alternating between sitting and standing throughout the day is critical to reduce the effects of static seating and stresses on the feet, hips and low back when standing in one position. Ideally, 25 minutes of seated work should be followed by 5–10 minutes of walking, followed by 25 minutes of standing work, then repeated throughout the shift.

What is the proper sit-stand workstation set up?

Top of the screen at eye level. For bifocal or progressive lens wearers the top of the screen may need to be 2–3" below eye level. Elbows at 90–100 degrees.



Portions of this document reference: 1. Cornell University Human Factors and Ergonomics Research Laboratory's study: Effects of an Electric Height Adjustable Worksurface on Self-Assessed Musculoskeletal Discomfort and Productivity in Computer Workers, 2. The Journal of Epidemiology's study: Leisure Time Spend Sitting in Relation to Totally Mortality in a Prospective Cohort of US Adults, 3. BBC News article, Oct. 26, 2013: Calorie burner: How much better is standing up than sitting?