

Sit to Stand Workstations: Maximizing Comfort and Productivity

For several years, there have been reports in the media about the harmful effects of sitting for the average office worker. This has prompted an increase in requests for standing workstations. Although it may sound like a common sense alternative, it's important to know that stationary standing has its own risks:

- **Swelling of legs, feet and varicose veins**

The blood from the heart travels to the legs and if a person stands stationary, circulation back to the heart decreases in a phenomenon called venous pooling. This creates more work for the heart and causes leg swelling, and varicose veins. One study found pressure in the veins at the ankle to double during stationary standing (Konz and Johnson, 2000). Recovery from leg swelling can occur in as little as 15 minutes of sitting (Van Dieen and Vrieling, 1998).

- **Spinal Shrinkage**

Spinal shrinkage was significantly greater during standing than during sitting (Beynon and Reilly, 2001). Recovery from back shrinkage is fairly quick and can occur at 10 minutes (Van Dieen and Vrieling, 1998) of sitting.

- **Low back pain**

Low back pain increased in 80% of individuals after standing in one position for as little as 30 minutes and those that experienced low back pain during standing were 3 times more likely to experience an episode of clinical low back pain requiring medical intervention within 2 years of the onset of standing (Nelson-Wong, E. et.al, 2014)



No one should use a sit/stand workstation without being properly informed of the risks, benefits and the ideal use of the equipment.

Robertson, et.al (2013) found that individuals using a sit/stand workstation without training experienced significantly more musculoskeletal discomfort in the neck, shoulder and lower back than those who were trained.

Additionally, visual discomfort for the untrained group also increased. When productivity was evaluated, those who received no training on the ideal way to use the sit/stand station made significantly more errors, presumably due to increased discomfort, than the group that received instruction and training.

Best Practice

- **Alternate your working position** frequently moving between sitting and standing at least one cycle every 60-90 minutes. Setting a timer for the first 2-3 weeks will help establish this habit pattern.
- Wear supportive footwear while standing and avoid high heels or sandals without arch support.
- Avoid use of a "standing" or "anti-fatigue mat". If your legs become fatigued, then you should sit down. The mat prevents use of the available task chair as the user has to either move the mat or risk making holes in it from the chair's casters.
- Assure your standing position allows your wrists to be in a neutral position when typing and mousing, otherwise forearm tension may likely develop (see picture to right)

