

Webinar: Working Posture and Movement: Using research and consulting experience to guide future employee education and intervention

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Problem: Media inflates the misconception that prolonged sitting at work alone can lead to increased risk of cardiovascular (CV) disease

- Is it sitting at work or living a sedentary lifestyle?

Here is what we know:

- Sitting at work is associated with obesity
- Increased technology use can lead to increased time spent sitting
- Diabetes may not clearly be related to occupational sitting, due to other risk factors
- Sedentary behaviour and limited cardiovascular activity has negative affect on health
- Occupational sitting on its own does not necessarily relate to poor health if you **are** active outside of the workplace

Bottom Line: Occupational sitting alone is not associated with CV disease.

- Total daily sedentary behaviour is biggest concern.
- There can still be some benefit to trying to improve mobility in the workplace

Interventions to change seated behaviour at work

1) Sit/Stand Workstations

Benefits: Can help reduce back/hip discomfort

Cautions:

- Metabolic impact
- Lower limb discomfort
- Increased Back discomfort
- People want them for the wrong reason
- Use inappropriately

Misconceptions:

- Standing office work burns more calories than seated (reality is this difference in calorie burning is not substantial)
- Standing desk leads to walking more (not necessarily true)

Study Findings: Lower limb discomfort

(Antle et al., 2013; Antle et al., 2014; Antle et al., submitted)

- **Standing work over 34 min** lead to increased lower limb discomfort (blood pooling) and back discomfort
- Increased in muscle fatigue
- More standing can lead to peripheral vascular disease
- Standing work without intermittent walking breaks is bad
- Standing can relieve seated work, but avoid long bouts of standing (effective rotation between sitting and standing is most important) (Callaghan et al., 2015; Gallagher et al., 2014)

Potential Recommendations for movement between sitting and standing:

- 3 to 1; standing to sitting
- Don't stand for more than 30 min
- Don't sit for longer than 60 min
- Rotation can also be dependant on an individuals specific requirements
- People who tend to rotate posture at will tend to have less concern

2) Treadmill desks

Positives:

- Burn more calories while working
- Improves motor variability

Negatives:

- Reductions in speed/accuracy in typing
- Cognitive impact/ability
- Injuries
- Cost of treadmill desk ~\$15000
- Real estate space (i.e. secondary workstation)
- Cost to health benefit ratio – Ex. 30 min to 1.5 hours per day burn ~150 calories = to 30 min brisk walking

Potential Recommendation: Application for conference rooms and conference calls, short period use

Considerations when looking for interventions to increase movement in the workplace:

- Careful on recommending alternate workstations
- Awareness of misconceptions surrounding sit/stand and treadmill workstations (i.e. Will not increase cardiovascular health)
- Assess clients "needs" versus "wants" - don't want to potentially create new problems for people with underlying issues
- Health Care provider recommendations
- Effects of using a treadmill for long period of time can create other problems

There is no magic bullet to help with sitting disease and media is overplaying the sitting concern. Workers are not getting the full message and there is a need to educate workers on the true risks associated with sedentary lifestyle, not just sitting at work.

To increase movement at work and at home:

For the Employee:

- Commitment to change including activity level outside of the workplace

For the Employer: Design workplace to promote more movement

- Central location for shared equipment (i.e. printing)
- Wireless headset to stand and walk while on the phone

- Break rooms in central locations so you walk to room
- Policy for movement (i.e. work warm up)
- Tracking movement (reminders for employees to move)
- Walking meetings
- Walk to interact with coworkers
- Walking groups breaks and lunch (promote a break and to move at break)

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