



CHIROPRACTIC (GENERAL)

## Sit or Stand? Strategies to Improve Workplace Health and Reduce Disease

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It's high time to discuss a somewhat revolutionary trend that is beginning to take hold: the notion that it is better to stand, as opposed to sit, while at work. During the past several centuries, humans have moved from a largely agrarian lifestyle to one in which many people sit throughout the day. In fact, I'm sitting at my computer as I write this. And when I take a break from my work, I will often go sit outside on the patio for a short while.

Since so many people sit at work these days, there has been a large amount of interest in designing the seated workstation to optimize the time spent and to reduce the likelihood of injuries from occurring. Ergonomic principles have been broadly applied, particularly to the seated workstation.

However, with the changes to a more sedentary lifestyle has come a change in the types of diseases we are likely to encounter. No longer are we as likely to succumb to infections and injuries, the types of ailments that did our forefathers in. Instead, we are now plagued by the development of more chronic diseases such as diabetes and heart disease. Partly because we have largely conquered some of the infections and injuries, the life expectancy in the United States increased by almost three decades during the 1900s (from the mid-40s to the mid-70s). It's said that we are now living long enough to get sick.

### Sitting and Chronic Disease

[Current research](#) shows that sitting for long periods of time is a risk factor for a variety of such chronic diseases. It is now known that prolonged sitting contributes to the risk of heart attack, stroke and a variety of metabolic syndromes. As an example, a study by Dr. Hidde van der Ploeg found that sitting for 11 or more hours each day increased the risk of death by 40 percent compared to sitting less per day. And that was in spite of other activity levels.<sup>1</sup>



Added to this increase in the development of chronic diseases are the negative effects that

accompany a relatively sedentary lifestyle. The plain fact is that Americans are getting bigger! The U.S. Centers for Disease Control and Prevention (CDC) states that nearly 36 percent of American adults are obese. This is up from 12 percent in 1990. And another 33 percent of adults are overweight. There is increasing evidence that the seated lifestyle contributes to this increase.

### Increasing Movement at Work

During the past few years, there has been an increasing interest in getting workers out of the office – or at least out of their chairs. As part of this trend, many employers have started to use and promote the stand-up workstation as a way of enforcing movement on an otherwise sedentary work force. A recent article in the *Huffington Post* provided the following suggestions for adding movement to the workplace:

- Use a [standing desk](#). Working from an upright position burns more calories (40 percent) than sitting. Additionally, prolonged sitting has been shown to increase plasma triglyceride levels, decrease levels of high-density lipoproteins and decrease insulin sensitivity.
- Take frequent office laps: Regular walk breaks helps circulation, helps to refocus the brain and helps to burn fat.
- Desk exercises: Perform exercises such as stretching while seated.
- Treadmill desk: This allows the user to walk at a slow pace while working. You can place a computer and a keyboard on a treadmill and type (work) while you walk.
- Yoga ball chair: Sitting on a yoga ball (aka Swiss ball, balance ball) helps to engage the core muscles and improves balance.
- Standing station: There are commercially available standing work stations, but improvisation is also acceptable.
- Active meetings: This is my favorite tip. Instead of sitting in a stuffy meeting room, move meetings to a track. I'm confident that meetings wouldn't last quite so long if they were not held indoors in meeting rooms with attendees seated comfortably in chairs.

### When Sitting Is a Healthier Option Than Standing

While many of the preceding suggestions involve standing at work, prolonged standing is no panacea, either. It would appear that movement is a key to remaining healthy. Workers should be encouraged to move from a sitting to a standing position and back as frequently as possible. It would appear that the use of a sit / stand stool might be a valuable resource. All one has to do is to look at the drawing tables that are used by architects. They even have an adjustable work surface. UCLA provides the following pointers for when work done when standing is preferable:

- When the job task cannot be done with the arms comfortably at the sides
- When working on products that are greater than 6 inches high or more than 10 pounds in weight
- When the work area is too large to be comfortably reached when seated
- When the work requires more than one workspace
- When the work task lasts less than five minutes
- When the work surface does not allow the worker to comfortably position their legs under the surface
- When tasks require the frequent application of downward pressures

Tasks that are to be performed from a seated position include those that are visually intensive or require precision. Also, when the task requires repetition it is best done from a seated position. By the way, one of the earliest ergonomic devices I'm aware of is the bar rail. Bartenders realized a long time ago that when their patrons had to lean on the bar, they fatigued quickly and went home. To keep them feeling better longer, the bars were fitted with a foot rail that patrons could place their feet on. This reduced the stresses on the lumbar spine, allowing them to stay longer. The

same foot rest is a useful addition to any standing work station.

As I've written this article, most of the work (in fact, all of it) has been done while seated in front of my computer. While I am aware of the risks, I still find it more natural to sit while I work. I have to admit, though, I have a treadmill in the garage and am intent on attaching one of my laptop computers to it so I can stand and work. And that walk the dog and I take is going to be a little longer now. I may even go twice each day, rather than once. I'm sure he'll enjoy that.

### *Reference*

1. van der Ploeg HP, Chey T, Korda RJ, Banks E, Bauman A. Sitting time and all-cause mortality risk in 222,497 Australian adults. *Arch Intern Med*, 2012 Mar 26;172(6):494-500.

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