

## *Is Sitting Really A Non-Strenuous Activity?*

*By Vincent Portera*



A walk through the offices of any hospital or company where a few, or perhaps hundreds of people sit at their desks or workstations day in and day out might lead the observer with the impression that sitting is a benign posture. Nothing can be further from the truth.

While sitting can take the “load off your feet,” it also increases the pressure on the lower back, including the discs, as well as the upper back and neck. Poor posture, such as “slouching” in your chair or slumping and rounding your shoulders forward, add to the strain placed on your spine and muscles.

Whenever you round your shoulders forward and slump, you allow your head to move and fall forward. The head, weighing an average 12 – 16 pounds in a forward position, puts a great deal of strain on the muscles, tendons and ligaments of the neck and upper back as they attempt to support the head in that posture. Add this to the prolonged seated posture inherent in most office settings and you have the basic ingredients for a multitude of problems.

Imagine placing your elbow on a table, with your arm straight up, and a 14-pound bowling ball in your hand. If it is balanced, you could stay there comfortable for quite a few minutes. Now, imagine extending your arm out in front of you, palm up. Place a 14-pound bowling ball in your hand and see how long you can maintain that position (posture). Not very long at all, I guarantee it! Yet that is what we are asking our neck and upper back muscles to do each and every time we slouch, slump or look down and hold our head in that posture.

A look at the office workstations of prior decades shows the typewriter as the central tool. Since typewriters required manual feeding of paper, along with frequent changes of paper, the office worker would make larger movements and utilize the larger muscle groups of the arms, shoulders and upper back much more frequently to accomplish changing pages. All of this would make more parts of your body share the work, so no one area experienced too much stress.

Fast forward to our 2004 version of the office environment where high speed computers zip us around a vast array of information – faster than we can input or move and click a mouse and without ever leaving our chair – sometimes for hours at a time. For the person who can input at a rate of 60 words per minute, you’re striking the keyboard on an average of 18,000 times per hour. So in our “computer” office environment, we hold long, constant postures and small movements are all that is necessary to find and process information. Most of us also have computers at home where we spend additional time in these prolonged seated postures.

The result is very few muscles share the work, they rarely rest, and stress builds up in them. Multiplied by hours per day, days per week, weeks per month, etc., it is easy to see why sitting and its associated activities as a primary office function are not only strenuous but does in fact contribute to a multitude of symptoms and disorders, like headaches, neck pain, low back pain, wrist/hand and forearm problems.

The human frame, and particularly the spine, has a natural and neutral position for maintaining maximum efficiency and performance and minimal stress. Maintaining this posture as often as possible in all activities and especially while sitting is essential to good musculoskeletal health. In addition, recent research on posture and systemic health is showing a correlation between poor posture and its negative impact on health, as organ function can be compromised.

In order to counter the stress placed on the human frame while sitting, try these preventative tips:

- **Sit all the way back or “*deep in your seat*”<sup>®</sup>**, with the back of the chair properly adjusted for you, keeping you upright and holding the curve in your low back.
- **Keep your head level**<sup>®</sup> - sit up straight, over your shoulders and avoid tilting your head to “cradle” the phone.
- **While performing data entry, “*sit with your elbows at your side and your wrists straight*”<sup>®</sup>**.
- **Change position frequently**, - about every 20 – 30 minutes. This can be done as subtly as lowering your chair an inch, keeping within safe limits, or standing up for a few minutes. This change in position provides movement for the spinal joints and discs and reduces stress and tension in muscles from work activity and holding prolonged postures.
- **While standing, do back extensions**, and if possible walk around your workstation for a moment or two.
- **Shoulder rolls**; - roll your shoulders forward and backward 3 times together, and then separately about once per hour.
- **Neck stretches**, - Periodically tilt your head back, forward, to the sides and then rotate it. (Stop if you feel pain other than a stretch)
- **For those 18,000 strokes per hour**. Do hand and wrist stretches about 3 – 4 times per hour during the time of prolonged data entry.

The positions that feel the tightest are the ones you should do more often to prevent discomfort. By reducing the stress and fatigue as we have described here - at home as well as while working, you will feel better, prevent cumulative trauma injury, be far more productive and enjoy an overall better quality of life!

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