



Sit/Stand At Your Desk

Research Round Up by Rob Duncan, Edited by Charlene Kopansky

Conducted by Jack Callaghan, Canada Research Chair in Spine Biomechanics and Injury Prevention, Department of Kinesiology, Faculty of Applied Health Sciences at the University of Waterloo and the leading expert on spine mechanics in Canada. first laboratory-controlled study offers new sit-to-stand workstation guidelines

Sitting is the new smoking. Time to get more active according to medical and research authorities.

Sit-to-stand desks are all the rage now. There are health benefits and productivity gains to be had using these desks. Those who change positions throughout the workday are at lower risk of developing lower-back pain, cardiovascular disease and even cancer than their sedentary peers. As recent feature stories and editorial-page cartoons in *Globe and Mail*, *National Post* and *Canadian Press* attest, the topic is timely and hot.

Sitting in a task chair all day is backbreaking work. The reason: lumbar flexion. “Our spine is strongest when it’s neutrally aligned, which is a standing posture, with just a little bit of flexion. As soon as you’re going into flexion, when you bend over and touch your toes, or sit in a chair, you’re putting stress on the outside curve of joints in the lumbar spine.” Jack Callaghan says.

Teknion funded a longitudinal study, an observational research method in which data is gathered for the same subjects repeatedly over a time period. Teknion designs and produces furniture for work. In the case of this specific study, individuals were observed over multiple four-hour time periods while working at a sit-to-stand desk performing a variety of typical office tasks. They were wired with infrared light-emitting diodes (IREDs) on their thighs, feet, pelvis, spine, trunk and head that were tracked by cameras in four corners of the room to record their posture and movement. Electrodes attached to their bodies recorded muscle activity. The subjects were constrained so that they couldn’t move around, but had to either sit or stand.

The big revelation of this study is to reverse the conventional sit-stand wisdom of a three-to-one sit-to-stand ratio. Instead, Dr. Callaghan’s team found, you should stand for three

and sit for one. So, if you sit for five minutes, try standing for 15 minutes. For an eight-hour workday this would break down to two hours of sitting and six hours of standing.

The Occupational Health and Safety Council of Ontario advises against sitting for more than six hours or standing for more than four hours. A Dutch workplace study concluded that one hour of standing without a change in posture poses a health risk. Yet another study suggests a two-hour limit for sitting per day, along with breaks for standing, or moving after 30 minutes of sitting.

Rob's Side Note: I have found that moving gradually up and down and side to side while standing is very helpful. Heel raises, moving side to side, small partial squats etc helped. In my case, this movement along with standing eliminated edema in ankles at the end of a day.

For the Full Story visit: <http://www.newswire.ca/en/story/1477925/new-research-reveals-how-long-to-sit-and-stand-at-your-desk-for-best-health>

2

² Submitted by Rob Duncan for posting on www.calainc.org

The opinions expressed in this article simply provide food for thought and are not necessarily endorsed by the author or editor. August 2015.

The CALA Team thanks Rob for his contribution to provoking thought and sharing information.