Getting Started with a Treadmill Desk Workstation: Proper Ergonomics

By Cary Wing, Ed.D., FACSM

September 2013

Learning Objective
This article provides a general overview of the proper ergonomics related to a treadmill workstation to enable the user to derive the maximum benefits of the system without producing unnecessary strain on the joints or unnecessary fatigue.

Key words:
Treadmill desk; Ergonomics; Workplace solutions; Workstation

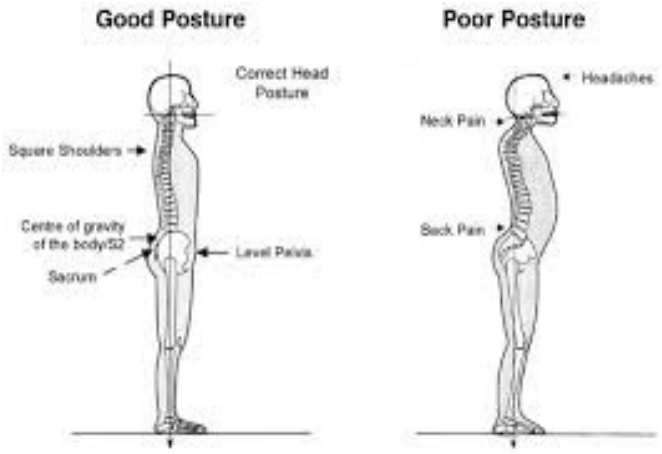
Stand more. Move more. Sit less. According to an abundance of recently published research it is evident that we sit too much especially during the work day. And, though a person may achieve the recommended daily and weekly amount of exercise, the computer age keeps us tied to our desk for hours. The prevalence of sitting and physical inactivity for long periods of time is an independent risk factor for many adverse health conditions, including major non-communicable diseases.

In an effort to address this issue, office workers are encouraged to make changes in their daily routines. In other words, get up and move more. To achieve these goals they can turn to workplace solutions such as incorporating a treadmill desk in the office. However, what are the recommended ergonomics to keep in mind when using this equipment to derive the maximum benefits of the system?

Ergonomic Guidelines

First, what do we mean by ergonomics? Ergonomics is the applied science of equipment design, as for the workplace, intended to maximize productivity by reducing operator fatigue and discomfort. Therefore, when using a treadmill desk, always remember the goals of avoiding unnecessary strain on the joints and decreasing the potential of undue fatigue.

According to the Occupational Health and Safety Administration, United States Department of Labor, when determining the best way to set up a computer workstation, it is helpful to understand the concept of neutral body positioning, i.e., a comfortable working posture in which the joints align naturally. Working with the body in a neutral position reduces stress and strain on the muscles, tendons, skeletal system, and reduces the risk of developing a musculoskeletal disorder (MSD). In the standing position, posture should be such that the legs, torso, neck, and head are approximately in-line and vertical. The user may also elevate one foot on a rest while in this posture.



www.workwhilewalking.com [Internet September 5, 2013]

There are basic ergonomic tips to consider when setting up a computer workstation or performing computer-related tasks. Remember the concept of neutral body positioning and follow these recommendations:

- Top of the monitor is at or just below eye level so that the user does not have to tilt the head up or bend the neck down to see the monitor
- Head and neck are balanced and in-line with the torso
- Shoulders are relaxed
- Elbows are close to the body and bent between 90 and 120 degrees
- Wrists and hands are straight, in-line, and roughly parallel to the floor
- Adequate room is allowed for the keyboard and mouse

A number of bloggers/writers chronicle their use of treadmill workstations, e.g. the Treadmill Desk Diary, and their tips can be useful. However, it is important to remember that the user must find the acceptable position and equipment that enhances his/her work environment and provides the greatest health benefit. With that in mind, there are organizations and companies beginning to realize the importance of sitting less,

standing and moving more, and are implementing strategies to assist employees to do so. Emory University is an example and offers Individualized Work Station Evaluations to educate, evaluate, and plan for a more productive and user-friendly workstation.

When purchasing a treadmill workstation, investigate companies that offer a variety of products to fit the needs of the office environment. Based on proper ergonomics ask questions about the desk and the treadmill. Is the desk height adjustable? Is it manual or electric? How large is the desk top? Will I have enough room for the keyboard and mouse? What type of treadmill should I use and what attributes should I look for? Companies such as LifeSpan offer Workplace Solutions™ to assist individuals interested in adding a workstation to the office. LifeSpan provides guidance and support to help with choosing the appropriate desk and treadmill for the worker as well as for the work area.

Summary

As the prevalence of treadmill desks in the office environment has increased over the last few years, many people have been concerned that the use of the workstation would have a negative impact on the quality of their work. Not so according to a study published in the journal *Obesity*. Results of the study show that a treadmill desk may improve the health of office workers without affecting work performance. So, in summary, with the appropriate understanding of proper ergonomics when using a treadmill desk you, the worker, can stand more, move more, sit less, and continue to excel at your job.

Resources

- Treadmill Desk Diary. Getting Started with Your Treadmill Desk: Treadmill Desk Ergonomics
- Computer Station Checklist; Occupational Health and Safety Administration, United States Department of Labor Web site [Internet]; [cited August 22, 2013]. Available from: www.osha.gov.
- Canadian Centre for Occupational Health and Safety Web site [Internet]; Working in a Standing Position. Available from: www.ccohs.ca.
- LifeSpan Workplace Solutions [Internet]. Available from: www.lifespanfitness.com

References

- American College of Sports Medicine. [Internet].Quantity and Quality of Exercise for Developing and Maintaining Cardiorespiratory, Musculoskeletal, and Neuromotor Fitness in Apparently Healthy Adults: Guidance for Prescribing Exercise. Medicine & Science in Sports & Exercise: July 2011 - Volume 43 - Issue 7 - pp 1334-1359.
- Occupational Health and Safety Administration, United States Department of Labor Web site [Internet]. Computer Workstations; [cited August 22, 2013]. Available from: www.osha.gov.

- Koepp, G. A., Manohar, C. U., McCrady-Spitzer, S. K., Ben-Ner, A., Hamann, D. J., Runge, C. F. and Levine, J. A.; study: Treadmill Desks: A 1-year prospective trial; 2013;21(4); pages 705–711
- Cornell University Ergonomics Web. [Internet]. Ergonomic Guidelines for arranging a Computer Workstation - 10 steps for users; [cited September 5, 2013]. Available from: http://ergo.human.cornell.edu/ergoguide.html

About the Author

Cary Wing, Ed.D., FACSM, has been in the health and fitness field for more than 30 years. She has been directly involved in the development and management of medically integrated health/fitness centers. For ten years (2000 to 2010), she was the executive director of the Medical Fitness Association (MFA). Dr. Wing is currently a medical fitness business advisor, national speaker, freelance writer, and social media specialist. She is a contributing author for *Club Insider*; co-author of *Exercise and Arthritis*, *Guidelines for the Fitness Professional* (*ACSM Health & Fitness Journal*, 2012); author of *101 Tips for Effective Social Media Marketing in Health/Fitness Clubs* (Healthy Learning, December 2012); associate editor of *ACSM's Health/Fitness Facility Standards and Guidelines, Fourth Edition*; and, the editor of the *Certified Inclusive Fitness Trainer Manual* (ACSM and NCHPAD, 2013). She holds a MA in physical education & sport, with a concentration in fitness management, from New York University, and an Ed.D. in applied physiology from Columbia University. To learn more visit www.carywing.com or follow her via Twitter @caryhwing.