Quality care
sports injury & rehab inc.

Office Ergonomics; Preventing Musculoskeletal Disorders

Musculoskeletal disorders represent over 50% of all work-related injuries. In Ontario, musculoskeletal disorders account for 42% of all lost time claims and 50% of lost time days. Ontario employers are estimated to have paid more than 12 billion in direct and indirect costs for musculoskeletal disorder related lost time claims.

In the office space, the main musculoskeletal hazards are: awkward postures, repetitive tasks, static tasks, force and cold temperatures. For example, improper placement of your monitor can lead to repeatedly twisting your head, which can contribute to neck stiffness, nerve root impingement, shoulder pain and even carpal tunnel syndrome.

There are several principles, according to the Canadian Service Ergonomic Guidelines (CSA), to follow when setting up a computer workstation. Below is a highlight of the most important information to follow.

Working Height and Chair

When seated, optimal working height is obtained when you sit upright, with your back supported, feet flat on the floor, with your hips and knees bent to 90 degrees. Arms should be relaxed at the side and elbows bent to 90 degrees. If your desk height will not allow for this proper working height, a foot rest should be added to maintain the hip position. At minimum, a good chair needs to have a gas lift, lumbar curve support and a back rest that adjusts up and down. Make sure the lumbar support fits into the back at the hollow of the low back and allow a fist widths distance between the back of your knees and the seat pan. The highest point of the seat pan should be just below the knee cap (when standing).

Keyboard and Mouse

When placing your keyboard, remember that elbows should remain at a 90 degree bend, upper arms should remain below 45 degrees from horizontal, tight to the body, and shoulders relaxed. "Home row" keys should be at the level of your elbows. Align your "B" and "N" keys with your belly button and nose. Wrists should be straight (not extended or deviate to either side) and shoulders relaxed, with or without a keyboard tray. The elevation stands on keyboards should not be used. Your mouse should be positioned as close to your midline as possible, at the same level as the keyboard. Mousing with your left hand reduces the amount of reach needed by the arm/shoulder by five inches (5") in comparison to using the right hand, due to the number pad on keyboards.

Monitor and Lighting

The top of the monitor screen should be level with your eyes. It should be directly in front of you, approximately an arm's length away from your body. The monitor should be tilted slightly backwards (between 0 and 20 degrees). If you are a bifocal wearer, viewing from the bottom lens, then the monitor screen should be lined up slightly lower than horizontal eye level. To minimize glare on your computer screen, the monitor should be positioned at right angles to the window. Focus task lights directly on documents, not on the monitor. If you use dual monitors, position the primary screen directly in front of your body and the secondary screen on the side of your dominant eye. For eye health, follow the 20-20-20 rule, whereby every 20 minutes you look 20 feet away for 20 seconds.

In addition, CSA guidelines suggest taking breaks from the computer every two hours. You should stand up for five (5) minutes every hour. Try to alternate computer tasks with non-computer tasks, such as filing and phone calls. Small changes to your posture throughout the day helps to avoid static positions that lead to fatigue, discomfort and overuse injuries. And remember, changes to your computer work station should be applied at work and home!

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MANY THANKS!