



# Ergonomic Considerations for Desk Workers

By Charles Smith & Cathleen Henniges



According to the World Health Organization, the majority of the world's population spends approximately one-third of their life at work. For many of us, this means we spend several hours each day sitting at a desk and looking at a computer screen. While certain habits are commonly known to help improve your health, such as eating healthy, drinking plenty of water, and avoiding contact with those who are ill, other habits for desk-bound workers may be overlooked. Practicing proper ergonomics whether you are working in an office or at home is a great way to help reduce your risk of neck and shoulder pain, lower back pain, carpal tunnel syndrome, and eye strain.

While a number of people have adapted to using a standing desk, the focus of this article is ergonomic considerations for chair dwellers such as ourselves. We suggest to start by choosing a chair that supports your spine and is height adjustable. When seated, your feet should rest flat on the floor or a footrest and your thighs should be parallel to the floor. Choosing a chair with lower lumbar support is always a smart choice. If your chair has adjustable armrests, they should be in a position so that your arms gently rest on them when your shoulders are relaxed.

When it comes to your desk, it is important to use a desk with clearance for your knees, thighs, and feet. If the desk is too low, the Mayo Clinic recommends placing sturdy blocks or boards beneath the desk legs. If the desk is too high, consider raising your chair and using a footrest. In the event you do not have a footrest, small stools or a stack of sturdy books can be used to prop up your feet. We have all seen the commercials for various configurations of standing desks, some that are even adjustable to give you the option to sit or stand. Frankly, we have never seen an adjustable height desktop big enough that we thought would accommodate all of the work piles and other items we like to have within reach.

The positioning of your keyboard, mouse, and computer monitor is just as important as having the proper chair and desk alignment. Your keyboard should allow you to keep your wrists straight with your upper arms close to your body and your hands at or slightly below the level of your elbows. It is also important to keep your mouse within easy reach and on the same surface as your keyboard. If possible, use a wrist pad and adjust the sensitivity of the mouse for easy operation with a light touch. Moving the mouse to the other side of your keyboard every so often can also help reduce wrist and arm pain.

Studies by the American Optometric Association (AOA) show that the average American worker spends seven hours a day on the computer. For this reason, it is no surprise that many of us experience computer vision syndrome, also known as digital eye strain, in which prolonged computer use leads to eye strain, headache, blurred vision, dry eyes, as well as neck and shoulder pain. Your monitor should be placed directly behind your keyboard and approximately twenty (20) to twenty-eight (28) inches away from your eyes according to the AOA. The center of the monitor should be about four (4) to five (5) inches below eye level. Avoiding glare is also important in reducing computer vision syndrome. If you cannot place your monitor in a position to avoid glare from overhead lighting and windows, you may want to use a screen glare filter. Consider talking to your eye doctor about special anti-blue light glasses or screen filters. Hydration of your eyes is important, and we suggest keeping wetting solutions within reach to prevent or alleviate dry eyes.

In addition to making the most out of your placement decisions, the AOA recommends taking breaks to rest your eyes when using a computer for extended periods. You can help prevent or alleviate computer vision syndrome by resting your eyes for fifteen minutes after every two hours of continuous computer use as well as by practicing the 20-20-20 rule. The 20-20-20 rule involves taking a 20-second break to view something 20 feet away every 20 minutes.

While not the focus of this article, it's also important to work in an environment as free of bacteria or viruses as is reasonably possible. During this current pandemic, the usage of face masks is essential, and continuing use of face masks will be highly recommended in the future for any person who might have a respiratory illness, or for you if you are around any such person. Other recommendations include daily sanitation of doorknobs, counters, and other surfaces with which persons regularly come into contact. Limiting handshakes or other personal contact, and frequent use of hand sanitizer has proven to reduce the spread of the flu virus in prior years. Consider the use of HEPA filtration throughout your office as our current understanding is that HEPA filtration has the potential to remove most airborne viruses. Don't forget to sanitize pens used by others and be sure to sanitize your cell phone. There are many ultraviolet sanitization machines that are safe for cell phones, small electronics, remote controls, keys, pens, and other small objects.

Learn more about reducing your chances of work-related aches and pains by checking out the American Optometric Association's website (<https://www.aoa.org/>) or by visiting the Mayo Clinic's website (<https://www.mayoclinic.org/>) and searching "office ergonomics."