Computer Workstation Ergonomics

1. Adjust the backrest of your chair for better lumbar support. If your chairs lumbar support is not adjustable, you can use a rolled-up towel or a back support cushion. The back of your chair should be adjusted slightly backwards to 135 degrees in order to reduce strain on your spine and ligaments. Adjust your armrest so they are out of the way while at your computer allowing for a neutral arm position.

2. Position your monitor so the top inch of visible monitor screen is level with your eyes. If you lean back while working, adjust the monitor lower to accommodate your more typical seated position. Laptop users should use a height adjustable laptop stand.

3. Position the monitor so that the screen is 90 degrees to your line of vision. Cover windows or move light sources to remove glare or reflections from the screen. You can also use an anti-glare computer filter. If you find yourself squinting your eyes or leaning forward in your chair to see the screen, move the monitor closer to you.

4. Proper monitor positioning is essential to avoid eye strain. When seated comfortably, the distance to the monitor should be such that you can see the screen clearly without needing to squint or lean forward. If you lean forward in your seat, you may experience back or neck pain from this posture. Center your monitor at arm's length and and then move the monitor as often as necessary to maintain a comfortable viewing distance. A helpful solution is to place your monitor on flexible, counterbalanced LCD monitor arms to maintain the most comfortable positioning.

5. Adjust your chair height so that your feet rest flat on the floor. Make sure to adjust your monitor and keyboard accordingly so you can sit down at this level. If you are unable to move your monitor or keyboard low enough, purchase an elevated footrest to reduce strain on your neck and back muscles when you are seated higher.

6. If you are frequently working from documents to the screen, use a document holder, preferably inline with your monitor screen. This will help organize your desktop and reduce the strain on your neck muscles by having to flex and rotate your neck to see documents placed flat on your desk.
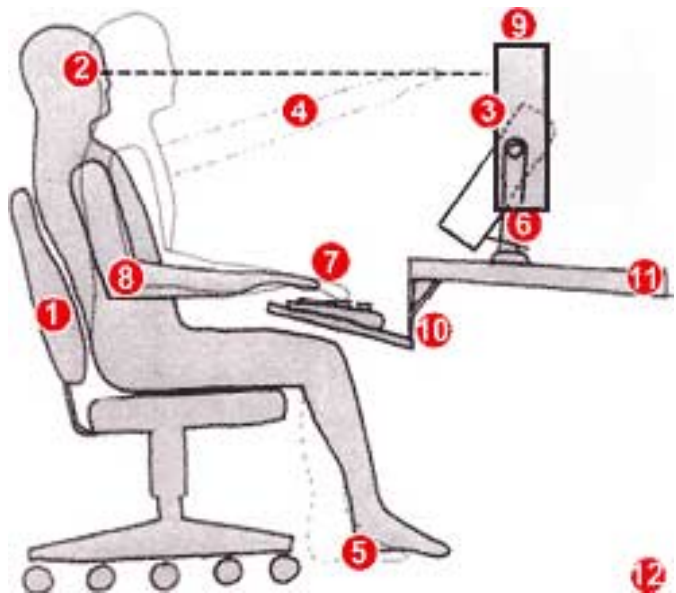
7. Your wrists should be flat and straight in relation to your forearms when using your keyboard and mouse. If your wrist is deviating left or right and your middle finger is not inline with the bones of your forearm as you type, you may need a different keyboard. If you rest your palms on the desk while typing, your wrist will be bent back to reach the keyboard, you should have a soft palm-rest to level out the angle.

8. Your arms and elbows should hang relaxed and close to your body. Your elbows should be bent at about a 90 degree angle. Your mouse should be kept close to your keyboard. If it is on the right side, you might have excessive external rotation at the elbow and/or shoulder. To reduce this stress on the elbow and shoulder, consider moving your mouse to the left side of the keyboard and using your left hand or find a way to move the mouse closer to the space bar on the right. A keyboard with a built-in mouse or without a number pad can alleviate this problem.

9. Keep your monitor and keyboard centered in front of you, not off to an angle. Your nose and belly button should be in a straight line to the center of the space bar and your screen. There should be no twisting in your shoulders or neck. Reposition your mouse as needed once the keyboard is in the correct position.

10. Use a negative (downward) tilt keyboard tray and an adjustable mouse platform to reduce wrist angles and stresses. Lower the feet at the back of your keyboard to remove upward tilting.

11. Use a stable work surface and a stable keyboard tray that does not bounce. Organize your desk to keep frequently used items within close proximity to avoid having to reach and strain. If you are a frequent phone user, and find yourself doing combined phone and desk tasks, use a headset to avoiding having to balance the phone between your neck and shoulders.

12. Take frequent microbreaks (i.e. 20 seconds to 2 minutes) and stretch. It is better to take regular short breaks than a few longer ones. Stretch at least once an hour (reference the "Workstation Micro-breaks" card). To prevent eye fatigue and premature nearsightedness, look away from your screen every 20 minutes and focus on something at least 20 feet away for at least 20 seconds.

References
These guidelines for workstation ergonomics were adapted from Cornell University studies to improve your working environment and comfort while at a computer workstation.

1. http://ehs.ucsc.edu/programs/ergo/documents/ergo-self-eval.pdf
2. http://www.ergoindemand.com/ergonomic-computer-workstation-guidelines.htm