# Office Ergonomics

Ergonomics is about creating a safe and efficient environment for people. By adapting the environment or equipment, people can perform tasks more effectively and safely, whilst preventing injury.

Checklist

1. Is the top of your monitor screen at eye level?	☐Yes	☐No
2. Is the monitor screen at least 50 cm from your eyes?	☐Yes	☐No
3. Do your wrists remain flat when typing?	☐Yes	☐No
4. Are your shoulders relaxed when computing?	☐Yes	☐No
Are upper arms roughly parallel with your torso?	☐Yes	☐No
5. When seated, are your feet flat on the floor with your hips at a 90-120° angle?	☐Yes	☐No
6. Can you adjust the height and angle of your monitor, keyboard, and chair?	☐Yes	☐No
7. Do you stand periodically while you work?	☐Yes	☐No
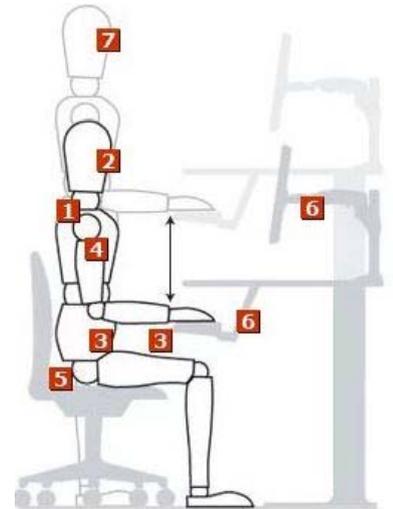
If you answered "yes" to all of the above, then you are on the right track.

Varying Positions

Ergonomic principles encourage variety and movement rather than exact postures in daily activities. Whether at work or home, it is important to vary body positions and stretch regularly to relax and strengthen muscles that are repeatedly used. Applying these principles can help avoid injuries from repetitive motions, muscle overuse, and static sitting. They also assist in preventing eye strain, headache, and fatigue resulting from improper posture and positioning.

- **Reduce eye strain:** Periodically look away from the monitor. Turn away from your screen to the opposite wall/ window and direct view toward a more distant object; close eyes briefly.
- **Take breaks:** Take a mini-break of 2 to 3 minutes for each half hour of work at the computer; for every two hours of work, take a 15-minute break. Complete side-to-side neck stretches or shoulder rolls
- **Change position:** Every twenty or thirty minutes change your position to assist circulation and relieve muscle tension.

Correct Seating

- Optimal seating is with an angle between 90-100 degrees at the hips, knees, and feet. Your thighs should be parallel to the floor with feet flat on a supported surface.
- There should be a space between the edge of the seat and the back of the knees. A rounded seat edge will avoid cutting circulation to the thighs.
- The lumbar curve of your lower spine should be supported by the chair.
- Shoulders should be relaxed, elbows at right angles and wrists in a neutral position. Forearms should be supported.
- Adjustable chairs, desks, and footstools can be used to encourage correct sitting postures.

1. Neutral Posture for Vision
Keep eyes about an arm's length from the screen as a rule of thumb. Generally you should be at least 50 cm away, but the larger the screen, the more distance you'll want. Your gaze should fall near the centre point of the screen, 15° to 30° below horizontal, which usually places your eyes roughly level with the top of the screen.

2. Neutral Posture for Head and Neck
Head: Directly over shoulders without straining forward or backward. The maximum forward tilt of your head should never go past 20° when scanning your screen.

Neck: Keep relaxed, with chin tucked in, not thrust forward.

3. Neutral Posture for Shoulders and Elbows
Shoulders: Keep down with your chest open and wide.

Elbows: Stay relaxed with a 90° to 120° angle.

4. Neutral Posture for Back
Keep your torso upright or reclined slightly - this means a 90° to 120° angle at the hips. Maintain the slight natural curve of the lower back with a cushion. If possible, alternate working in a standing position to ease the strain that sitting can put on your spine.

5. Neutral Posture for Wrists and Hands
Wrists: Relaxed and in a natural position, without flexing up or down.

Hands: Relaxed while keeping fingers gently curved and supported.

6. Neutral Posture for Knees
Slightly lower than the hips with 2 or 3 fingers' space between the back of the leg and the chair.

7. Neutral Posture for Feet
Should be flat on the floor. Don't cross legs or ankles. Use a foot rest if feet do not touch the floor.

8. Voluntary Motion and the Display
Use an adjustable stand or arm. Tilt the screen back 10° to 20° to equalise focal distance from the top to bottom of screen. Also turn or tilt screen to minimise glare. Exception: If using bifocals, lower the monitor below eye level and turn screen upward, tilting it back 30° to 45°. As posture changes, reposition the screen to maintain an optimised view: rotate, change height, and extend/retract as necessary.

9. Voluntary Motion and the Keyboard
Use an adjustable tray for your keyboard and mouse (the standard height of worksurfaces is often too high). Tilt keyboard back roughly 10° to keep wrists flat. Maintain a keyboard height that is even with your elbows. As your posture changes, reposition the keyboard to maintain Neutral Posture of arms, wrists and hands: rotate, change height, and extend/retract as necessary.

10. Voluntary Motion and the Chair
A chair should be configurable so as to conform to your body, providing adequate lumbar and arm support while placing legs and feet in their Neutral Posture. The seat should slope slightly forward to facilitate proper knee position. An adjustable chair, with tilt, rotation and castor wheels, can adapt to changes in position that your body naturally makes during the course of the day.

11. Rest Time with Breaks and Stretching
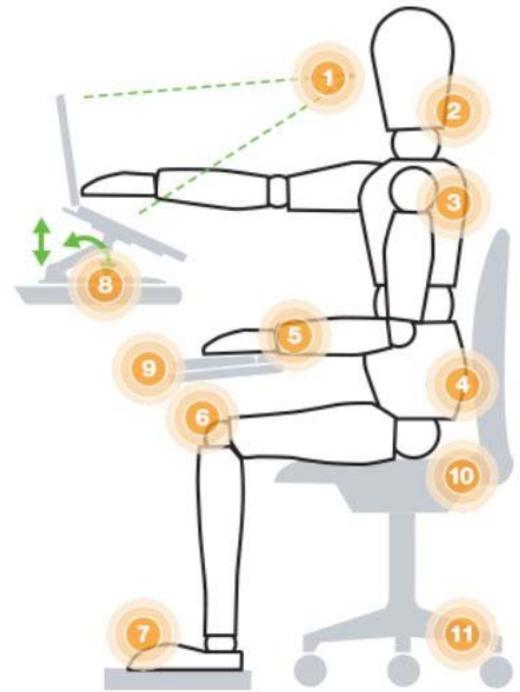
Lighting

Prevent computer glare by adjusting screen brightness, nearby lighting or repositioning monitor. Monitors should be placed perpendicular to windows to eliminate glare. If that is not possible, shades can be drawn. Consider a screen filter to reduce glare.

Keyboard

- Your arms should be relaxed whilst working with elbows at a right angle and wrists neutral.

- A keyboard tray that slides can assist in maintaining a correct ergonomic position.

- Split keyboards can adjust to the user's comfortable working position and encourage relaxation of the shoulders, wrists, and hands.

- Whilst typing keep your arms off your arm rests, and your wrists off your wrist support. A wrist rest is designed to protect the arms and wrists from coming into contact with a sharp leading edge of a work surface. Unfortunately, many people use both of these items as supports to lean on, but they can reduce the body's ability to absorb shock, increase muscle tension and reduce blood flow in and out of the hands.

Mouse

A mouse should be positioned within easy reach. The mouse should fit the user's hand. Trackballs may reduce pain related to excess shoulder movement, but at the same time put more strain on the fingers. Consider alternative mouse options such as touch pads, vertical mouse, joysticks, head-controlled mouse, infrared hands-free mouse, pen tablet, or a foot operated mouse.

Joystick   *Rollerball/ Trackball*   *Trackpad*   *Foot Mouse*

Mouth Mouse   *Gyroscopic Mouse*   *Head Control*

* Reference: Ergotron. Tools to plan your space. Retrieved from: www.ergotron.com

For more information, please contact

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