

Home Office Ergonomics

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As workplaces try to prevent the spread of COVID-19 we unconventionally find ourselves working from home. Although we may have had a "home office" set up previously which was used on an occasionally basis, we now find ourselves spending endless hours at the computer. If not using proper posture and body mechanics, this could be leading to aches and pains. Here are a few tips to assist you with ensuring proper positioning in your home working environment.

Pelvis/low back

- Aim to have the angle at hips at 90 degrees or slightly greater.
- It's important to support natural lumbar curve to prevent harmful strain on the intervertebral discs, with proper back support from chair. Try using a rolled up towel or small pillow.
- Keep body close to work to avoid leaning forward. By leaning forward, users can cause neck and upper back strain.
- Need to keep arms as close to side as possible as spinal loading increases with the arms extended.

Neck

- Neck should be in neutral position. Ideally, the top of the monitor should be at eye level. If your monitor or laptop is too low, try raising using a few texts books or a game box.
- Avoid neck extension (when monitor is too high) as this will cause fatigue of neck musculature.
- Monitor 18-24" away from eyes (one arms length), farther causes head forward posture, closer results in eye strain.

Shoulders

- Maintain shoulders in neutral alignment
- Mouse should be on same level as keyboard as you want to prevent extended reach, which will amount to shoulder, neck, and upper back fatigue.

Elbow

- Maintain elbows at an angle of 90 degrees or slightly greater.
- Keyboard at elbow height or slightly lower, never higher.
- If using a laptop and you have a spare keyboard and mouse, use these. Prop the laptop up on a stack of books so that the screen is at eye level and place

the external keyboard and mouse on the table or desk surface, ideally at elbow height.

• If armrests are being used to rest elbows while keying, they should be positioned one inch below elbow height.

Wrists/Hands/Fingers

- Wrists straight (neutral)
- Resting wrists on corner edge of desk is high risk for pressure. Desk edge is sharp. Wrist rests prevent this but must be used properly. Need to be positioned below home row and should be made of a soft material. They are to be used for occasionally resting wrists from keying.
- If using armrest, need to be close to body so not to deviate wrist position (awkward position).
- Trim your nails so that fingertips are not flattened out during keyboard use and the functional curve of hand is lost. Keep nails medium to short and stay up on the soft rounded fingertip.

Knees

• Angle at knees should be 90 degrees or slightly more. Ideally there should be 2" clearance between front edge of seat and back of knees. Need to allow for blood flow to lower legs and venous return.

Feet

• Flat on floor or footrest with lower legs at right angles to floor. This can be increased but decreasing below 90 degrees can cause reduction in blood flow and subsequent fatigue.

Eyes

Eye problems may result from:

- sustained exposure to excessive screen glare (reflected light)
- screen flicker

- strong, direct back lighting (usually from a window behind the computer
- very dry indoor air (30% relative humidity/72 degrees F, seen particularly in the winter months)
- Poor positioning of monitor and document holder

Solutions:

- Dim lights
- Tilt screen or use antiglare screen
- Look away from the screen occasionally and focus on distant objects
- Change orientation of computer (monitor should not be facing window or light source)
- Use window blinds
- For dry eyes, use artificial tears and glycerin-containing face creams to assist eye/eyelid irritation.
- Ensure proper alignment of monitor to prevent eye fatigue

Even good posture is not to be held for long time! Take microbreaks which are 30-60 seconds long that allow you to vary your working posture by standing, walking and performing gentle stretches. You can also change from sitting to standing to work by using your laptop at your kitchen counter for short periods of time. If you choose to try this, ensure you prop the laptop on books to reduce being hunched over.

Good luck and stay safe!

