Ergonomics and Work at Home

This document is intended to support ergonomic configuration of home office workstations and home office practices that are likely to keep employees healthy and productive.

Sections below include Employer/Employee Responsibilities; Musculoskeletal Injury Early Signs and Symptoms; Tips for Configuration of a Home Office; Tips for Mobile Phone and Landline; and Working at Home Lifestyle Tips.

If symptoms are experienced or if employees have pre-existing conditions that may be aggravated by work, request further assistance to ensure that the home-office workstation supports safe work. Use of the information below is not intended to replace the expertise of a certified professional ergonomist, when warranted.

Robinson Ergonomics Inc. (Dan Robinson, PhD CCPE) can provide a certified professional ergonomist for onsite or remote ergonomics assessment.

Employer and Employee Responsibilities

https://www.worksafebc.com/en/about-us/news-events/announcements/2020/March/health-safety-responsibilities-when-working-from-home

Employers are responsible for establishing clear health and safety policy and procedures to support work from home, including clear supervisory roles, check-in protocol for working in isolation, and incident reporting procedures.

Employees are responsible for working safely in the home environment, including assessing hazards in their home environment and reporting any concerns to their manager. Ergonomics and configuration of the home workstation to minimize risk of musculoskeletal injury (MSI) is a component of working safely in the home environment.

Musculoskeletal Injury (MSI) Early Signs and Symptoms

Recognizing and responding to early signs or symptoms of MSI is important. All body parts are at risk; however, the most frequent issues for computer-based work involve the upper extremities (hand, wrist, forearm, elbow, shoulder), neck and back. Early signs and symptoms may include aching, pain, numbness, tingling, pins and needles, fatigue, or muscle weakness. If these are severe, persistent or worsen with time, report to your supervisor, OHS Committee or first aid and see your physician.

Computer Workstation Physical Configuration – Tips for Home Office

A home office for computer-based work or telework has the same physical targets as work in a corporate office. Work from home is more likely to involve use of a laptop computer and less likely to have a fully adjustable ergonomic workstation. Tips below are intended to support configuration of a home workstation to minimize risk of MSI associated with computer-based work or telework, and with minimal additional costs for furniture or equipment. A little ingenuity and attention to detail can make a large difference in your comfort, risk of injury and productivity.

If additional equipment is required for a home office, discuss options with your Manager to determine the best course of action to meet that requirement. The provision of equipment for a home office may involve purchasing new equipment or accessing existing equipment from your employer that may be brought home. If bringing equipment to your home from work, first obtain permission and arrange for safe building access and transportation/storage of equipment through your Manager.

Physical Workstation Configuration Targets:

<u>Posture</u>: 90° to 100° angle at knees, hips, and elbows. Everything else straight and elbows close to body.

<u>Monitor</u>: top menu bar at eye height (lower if bifocal or progressive lenses); arm's length away; centred to nose (if 2 monitors, centre the primary); orient 90° to window.

<u>Lighting</u>: even light levels; background no more or less than 2x monitor brightness; no glare or hot spots on the monitor/desk.

<u>Keyboard/mouse or worksurface</u>: at elbow height with relaxed shoulders; centre on the 'b' key or middle of alpha keyboard; mouse close and immediately beside keyboard.

<u>Feet</u> on the floor or well-supported in front of the chair.

Chair and keyboard/mouse height

Ideal chair height places feet solidly on the floor, knees at 90-100° and elbows at or slightly above keyboard/mouse height. There are two aspects to this fit – chair height and keyboard/mouse height. If you have a height adjustable chair and/or desk, adjust those to fit. If not:

Chair too short or keyboard/mouse too high?

1. Add a cushion or a folded towel/blanket on top of the seat pan to raise the chair height. Or,
2. Find a lower worksurface to bring the keyboard/mouse down to elbow height. Or,
3. Lower the keyboard/mouse to your seated elbow height by using a small shelf or plank that rests on your lap to support the keyboard/mouse.

Chair too tall or adjusted too high to provide solid foot support on the floor?

1. See the options above to lower the keyboard/mouse and allow the chair to be lowered. Or,
2. Place a footrest or other stable item (e.g., box, books, briefcase) beneath your feet for support.

Monitor height

Set the top menu bar at eye height by adjusting the monitor stand, installing a monitor riser or use another stable support of appropriate height. A shelf, box, books or reams of paper can work well.

Wearing bifocal, trifocal or progressive lens glasses?

Ideal monitor height will be lower than eye height and is based on the reading zone in your glasses for arm's length. Prescriptions differ, so this will need some trial and error to find a monitor height that does not need backwards head tilt to read mid-screen. Or, consider computer prescription glasses.

Placement of paper reference materials

The ideal location for paper reference materials is between the keyboard and monitor.

1. Consider the use of an inline document holder such as 3M DH640 or VuRyte 180DC. Or,
2. Use a 3" binder or clipboard to angle the document for easier reading.
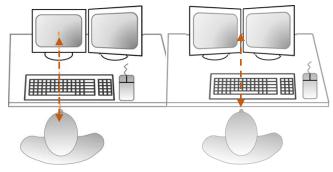
Laptop Tips

Laptop keyboard and monitor are connected. Great for portability but poor for physical configuration. Prolonged use of a laptop with poor physical setup increases risk of neck, back and shoulder MSI.

1. Add a peripheral keyboard and mouse – set at elbow height. Bluetooth or single USB keyboard/mouse system (e.g., Microsoft Sculpt Ergonomic Desktop L5V-0002) makes connection easier. Bonus Tip for MS Sculpt Ergonomic Desktop: put mouse beside the keyboard and number pad to the right.

2. Use the laptop as a monitor or add a peripheral monitor. Set the top menu bar at eye height by installing a laptop stand or monitor riser, or use a shelf, box, books or other stable support.

Using two monitors or laptop as a second monitor

If work benefits from the use of two monitors, setup of two monitors depends on how they are used.

1. Use one monitor for most work and the second monitor for reference materials. Align the primary monitor as if it was the only monitor. Centred on you and your keyboard, arm's length away and top of the monitor at eye height. Put the second monitor tight beside the primary on the mouse side (usually the right) and angle the second monitor slightly towards you. Drag active work onto the primary monitor (e.g., use the second monitor to track incoming emails but move longer emails onto the primary monitor to read or write).
2. If two monitors are used equally and simultaneously, align the midpoint between the monitors to your keyboard and angle both monitors equally towards you.
3. If the second monitor is a laptop, you have two choices:

   a. Treat the laptop like a normal second monitor raised so top of the screen is at eye height (see left). Or,
   b. Treat the laptop like a reference document immediately between the primary monitor and keyboard (see right). Angle the laptop to be able to view the lower menu bar on the primary monitor. The laptop is for reference materials only.
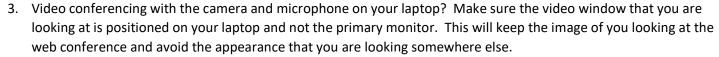
Tips for Mobile or Landline Phone Use

Mobile or landline phone use for extended periods of time increases risk of neck, shoulder, elbow, wrist and hand MSI. Prolonged grip and awkward postures place strain on these tissues.

1. Voice calls
   a. Where privacy allows, use the speaker function.
   b. Use a headset or ear buds and microphone.
   c. Consider use of audio or video conferencing on the computer rather than telephone.
   d. Balance the use of phone with email to shorten the duration of phone calls.
2. Emails and texts by mobile phone
   a. Use your mobile for short email/text messages only. If longer than a sentence or two, use your computer or call the recipient.
   b. Consider using voice to text or use audio messages rather than typing longer text messages or emails on a mobile phone.
   c. Reading or sending texts on your mobile phone? Tuck your elbows in close to your body and raise the phone to read the screen without looking downward.
3. Video conferencing with the camera and microphone on your laptop? Make sure the video window that you are looking at is positioned on your laptop and not the primary monitor. This will keep the image of you looking at the web conference and avoid the appearance that you are looking somewhere else.

Working at Home Lifestyle Tips

Working from home presents challenges and benefits that may differ from the usual workplace. Tips to manage some of these challenges are outlined below. Not all tips are relevant for everyone. Select those that fit with your home and your living situation.

1. **Establish separation**. Work/Life balance is easier if there is a clear distinction between your work life and your non-work life. Having a predictable routine is better for you, your employer and those you live with.
   a. Physical separation: identify a workspace or workstation that you can configure for working. Use that for work. Keep the rest of your home for non-work activities.
   b. Time routine: define work hours that represent your usual work hours and that allow connection and availability with co-workers. Use that for work. Keep the rest of your time for non-work activities. If you have kids at home, break your workday into routine segments that fit with your kids' schedule. For example, rather than working 9 to 5, it may be easier to work 7-11 and 2-6 with a break mid-day to interact with kids.
   c. Personal preparation: maintain a morning routine that prepares you for work. Exercise, breakfast, personal hygiene, getting dressed for work, or whatever your usual routine would entail.
   d. Personal maintenance: keep a workday routine that includes regular short breaks. Get up every hour to move, to stay hydrated, to eat, or to check in with others sharing your living space.
2. **Maintain connection**. Work from home reduces touchpoints that you may otherwise have with co-workers, supervisors, students. Connection supports mental health and productive work.
   a. Schedule a regular telephone or web-conference check-in with your supervisor, co-workers, or workers who are supervised by you. This type of check-in is more organic and has greater interpersonal value than an email or text message.
   b. Increase the frequency of check-in if you or a co-worker are isolated and not sharing living space with others.