

Work at Home Office Ergonomic Assessment

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We have become a society connected remotely through the advancement of technology. Many people are constantly connected to work and family via smartphones, tablets, laptops, webcams, cloud technology and virtual meetings.

Unfortunately, the advances in connectivity have not necessarily translated into advances into most workers' personal ergonomics. The typical telecommuter may spend countless hours in awkward unchanging positions that often occur in tight or cramped spaces. The result is often pain and discomfort that may impact the worker's productivity and personal comfort.

Like office workers, telecommuters should be provided with proper office equipment such as a good chair, external keyboard and mouse, external monitor along with a laptop or desktop computer. Remote employees should be encouraged to use ergonomically designed workstations and proper equipment. Since ergonomics is about fitting the task to the person, it is important to provide telecommuters with information on how to set up their home offices.

Self-assessment guidance for Home Offices

Home offices should be set up according to the same standards as a work office. See Figure 1.

- Elbows at 90 degrees with wrists straight
- Upper arms located by the workers side
- Mouse located next to the keyboard and at the same height
- Keyboard at the same height as the elbows
- Seat height adjusted so the thighs are parallel to the floor
- Lumbar support adjacent to the small of the back
- Top of screen at eye level
- Monitor located approximately arm's length away from worker
- Feet firmly supported by the floor or by a footrest
- Leg room should be free of obstruction
- Micro-breaks should be taken frequently throughout the day

Offsite Employee Workstation Evaluations

When equipment is not adjusted correctly or does not fit the worker, it can cause discomfort which may lead to musculoskeletal injury. Many times, discomfort is the trigger that begins the ergonomic evaluation process and should not be ignored. Like office workers, workstation evaluations should be performed in the telecommuting environment as well.

Monitoring the Work Conditions.

Understanding the range of activities that are performed in a typical workday is important along with establishing ongoing evaluations of offsite employee workstations. Non-intrusive, remote ways to monitor the telecommuting work areas vary. These may include taking digital photos of the work area, using web cameras to capture the work environment as well as discussing and viewing the work area via FaceTime/Skype on a phone or tablet.

Self-Assessment and Training. Self-assessments of telecommuter work areas should be completed to identify potential areas for improvement. A self-assessment checklist should be provided or access given to perform online self-evaluations. A checklist should provide benchmarks for proper postures while using different office equipment based on ergonomic principles. Additionally, ergonomic suggestions for improvement should be provided to give feedback on changes and adjustments the employee can make to improve to the workstation. Ergonomic training should be provided to workers so they have the knowledge to make the needed changes to their work areas.

Next Steps. Based on the results of the self-assessment, provide suggestions for improvement to adjust current equipment or provide equipment as needed. Conduct a follow-up assessment of the workstation to determine the effectiveness of the changes made. The re-assessment will allow for determining if the changes are making a positive impact on the worker, or whether another iteration of changes are required.

Additional changes may need to be made to other workstation elements once the new equipment is in place.

For additional details on fitting the workstation to the worker, please refer to Chubb's Telecommuting Ergonomics Tool Kit or Office Ergonomics Tool Kit.

Photo Taking Tips for Remote Office Evaluations.

Typical photos of workstations include:

1. Side view of employee in the chair:

This photo should capture how the employee fits the chair i.e. chair height, seat pan angle, lumbar support height, backrest angle, seat pan depth and armrest height.



2. Side view of employee in chair while typing:

The photo should give a clear view of any wrist deviations and shoulder abduction while typing.



3. Side view of employee in chair while mousing:

This photo identifies postures and reaches associated with mouse use.



4. Side view of employee viewing the monitor with one arm stretched in front of the employee:

This photo should capture monitor related postures such as neck angles and factors such as monitor distance.



5. Overhead or back view of workstation:

This photo provides an overall view of the workstation and all the workstation components including chair, keyboard, mouse, monitor, telephone, document holder and printer.



Additional Tips:

- Photos should provide a minimum of two viewing angles for body postures
- The photos should include visual information of all workstation features.
- Photos should capture a side/profile view
- The photos should capture the employee's typical posture and how they interact with their workstation.
- In order to understand the location of the equipment in the workstation relative to the employee, the employee should be included in the pictures.

Telecommuting Ergonomics Checklist



- Elbows at 90 degrees with wrists straight
- Upper arms located by the worker's side
- Mouse located next to the keyboard and at the same height
- Keyboard at the same height as the elbows
- Seat height adjusted so the thighs are parallel to the floor
- Lumbar support adjacent to the small of the back
- Top of screen at eye level
- Monitor located approximately arm's length away from worker
- Feet firmly supported by the floor or by the footrest
- Leg room should be free of obstructions

Chair	Yes	No	N/A	Potential Fixes	✓
Is the chair height adjusted so the user's thighs are parallel to the floor?				Adjust chair height	
Is the lumbar support adjusted so that it fits into the lumbar region of the user's back?				Adjust lumbar support	
Does the backrest recline have a lockout to support the worker in an upright posture?				Provide new chair	
Is the seat pan depth adjusted to allow three fingers, width between the back of the user's knee and the front of the seat pan?				Adjust seat pan depth	
Are the armrests adjusted to just below the elbow of the user?				Adjust armrests	
Do the armrests allow the user to get close enough to the workstation?				Remove armrests	

Keyboard Tray, Keyboard & Pointing Device	Yes	No	N/A	Potential Fixes	✓
If the chair needs to be raised to position the user better with respect to the keyboard and pointing device, is there a footrest available to keep the user's thighs parallel to the floor?				Provide footrest	
Would an articulating keyboard tray provide the user with a better approach to the keyboard?				Install keyboard tray	
Is the keyboard tray large enough for both keyboard and pointing device?				Change or repair keyboard tray	
Is the keyboard tray stable?				Change or repair keyboard tray	
Does the angle of the keyboard allow the wrists to be straight?				Change keyboard tray angle	
Does the pointing device (e.g. mouse, trackball, etc.) fit the hand?				Provide different pointing device	
Is the pointing device located next to the keyboard in a location where it can be operated without extended reaching?				Adjust pointing device location	
Is a wrist rest or padding available to protect against hand or forearm contact to sharp or hard edges?				Add wrist rest for keyboard and/or pointing device	
Is the user required to lean against the wrist rest to perform tasks?				Change wrist rest	
If a laptop computer is used, are an external keyboard and pointing device provided?				Provide external devices	

Monitor & Source Document	Yes	No	N/A	Potential Fixes	✓
If a laptop computer is used, is an external monitor provided?				Provide monitor	
Is the monitor located in front of the worker?				Reposition monitor	
Is the monitor approximately an arm's length (with fingers extended) away from the worker?				Lower monitor	
Is the monitor set at a height so that the top row of characters on the screen is even with the seated eye height of the user?				Raise monitor	
If a document holder is used, is the document holder located adjacent to the computer screen?				Move document holder	

Phone & Printer	Yes	No	N/A	Potential Fixes	✓
Is the phone located on the same side as the hand that is used to answer it?				Move phone to opposite side	
Can the phone be answered without extended reaching?				Move phone closer	
Does the worker talk on the phone without cradling it?				Add headset or speaker phone	
Does the worker utilize speaker phone or a headset while participating in conference calls?				Add headset or speaker phone	
Can the printer be easily accessed?				Relocate printer	

Work Surface	Yes	No	N/A	Potential Fixes	✓
Can the user move about the work space easily, without equipment, the CPU and/or supplies ?				Reposition CPU	
Is there adequate leg clearance (height, width, depth)?				Provide leg room	
Is there sufficient storage and filing room to keep the work area free from clutter?				Provide more storage	

Environment	Yes	No	N/A	Potential Fixes	✓
Is lighting adequate for all tasks?				Provide task lighting	
Is the monitor screen free of glare from overhead lighting?				Reduce overhead lighting	
Is the monitor located perpendicular to windows or are windows heavily tinted?				Use blinds	
Is equipment noise minimized at the source?				Reduce noise	

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