

Ergonomics Toolkit

Telecommuting Ergonomics

CHUBB®



Connected

We have become an e-mobile society. Many people are constantly connected to work and family via smartphones, tablets, laptops, Webcams, virtual meetings and the Cloud. According to the Bureau of Labor Statistics, this instant connectivity has enabled approximately 24% of the American workforce to work at least some hours at home, outside the realm of what is considered a traditional office environment. Telecommuting has many benefits such as increased worker productivity, reduced commuting time and expenses, increased work schedule flexibility (also a potential drawback), improved job satisfaction and retention, and reduced sick leave. Drawbacks to telecommuting include loss of face-to-face collaboration, extended working hours due to schedule flexibility, the expectation of always being connected, feelings of isolation, and making do with whatever workstation is available.

Unfortunately, the advances in all this connectivity have not necessarily translated into advances in most workers' personal ergonomics. The

typical telecommuter may spend countless hours in awkward unchanging positions that often occur in tight or cramped spaces. Since ergonomics is about fitting the task to the person, it's important to provide telecommuters with information on how to handle working in challenging situations.

Telecommuting: The Home Office

It's rare to find a home without a computer in today's society, even if the computer is used just for personal activities. The same ergonomics principles that are applied to a traditional office, shown in the Office Ergonomics Workstation Model on the next page, should be applied at home in a designated workspace. Unfortunately, since some employers view the opportunity to work from home as a benefit, they do not see the need to provide adjustable equipment. The responsibility for this usually falls to the employees, who more often than not simply make do with the furniture they have at hand—from the kitchen table and chair to a makeshift desk or card table in a bedroom. The result is often

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pain and discomfort that may impact the company's health insurance or worker's compensation costs. It works to everyone's advantage if the company takes measures up front to make sure the employee is set up correctly and has the resources to address any problems that may arise. For additional details on fitting the workstation to the worker, please refer to Chubb's Office Ergonomics Workstation Model.

The body functions best when it is in a neutral posture— located around the joint's midrange of motion for most body parts. A posture significantly outside this neutral range, termed an awkward or extreme posture, is inefficient and requires muscles to work near their maximum capacity which may result in increased fatigue rates and musculoskeletal disorders (MSDs). Unfortunately, awkward postures are inherently designed into laptops—a

common tool for many telecommuters. If the laptop is positioned so the upper extremities are in neutral postures, then the screen is too low and the neck will be bent forward (flexed) in an awkward posture. If the laptop's screen is positioned higher to keep the neck neutral, then the upper extremities are placed in awkward postures with shoulders shrugged and forearms slanted upwards.

If employees primarily use a laptop for telecommuting, a docking station should be supplied. A docking station with external monitor, external keyboard and external mouse will permit independent positioning and make ergonomic- neutral postures more achievable. A document holder is an essential add-on to also keep the neck in neutral postures when transcribing or referring to source material. Another advantage of a docking

station is that the laptop can be undocked easily for use when travelling.

Technology advancements have many upsides, but they also present some new challenges for the telecommuter. These workers can easily slip into an "always-on" lifestyle with extended working hours in awkward postures. Using ergonomics principles to fit the task to the person can prevent pain at the office and when telecommuting.

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Chubb's Office Ergonomics Workstation Model



- 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

Telecommuting Ergonomics Checklist

Chair	Y	N	N/A	Potential Fixes	✓
Is the chair height adjusted so the user's thighs are parallel to the floor?	<input type="checkbox"/>	<input type="checkbox"/>		Adjust chair height	<input type="checkbox"/>
Is the lumbar support adjusted so that it fits into the lumbar region of the user's back?	<input type="checkbox"/>	<input type="checkbox"/>		Adjust lumbar support	<input type="checkbox"/>
Does the backrest recline have a lockout to support the user in an upright posture?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Provide new chair	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Adjust seat pan depth	<input type="checkbox"/>
Are the armrests adjusted to just below the elbow of the user?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Adjust armrests	<input type="checkbox"/>
Do the armrests allow the user to get close enough to the workstation?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Remove armrests	<input type="checkbox"/>
Keyboard Tray, Keyboard & Pointing Device	Y	N	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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Provide footrest	<input type="checkbox"/>
Would an articulating keyboard tray provide the user with a better approach to the keyboard?	<input type="checkbox"/>	<input type="checkbox"/>		Install keyboard tray	<input type="checkbox"/>
Is the keyboard tray large enough for both keyboard and pointing device?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Provide an extended keyboard tray	<input type="checkbox"/>
Is the keyboard tray stable?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Change or repair keyboard tray	<input type="checkbox"/>
Does the angle of the keyboard allow the wrists to be straight?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Change keyboard tray angle	<input type="checkbox"/>
Does the pointing device (e.g., mouse, trackball, etc.) fit the hand?	<input type="checkbox"/>	<input type="checkbox"/>		Provide different pointing device	<input type="checkbox"/>
Is the pointing device located next to the keyboard in a place where it can be operated without extended reaching?	<input type="checkbox"/>	<input type="checkbox"/>		Adjust pointing device location	<input type="checkbox"/>
Is a wrist rest or padding available to protect against hand or forearm contact with sharp or hard edges?	<input type="checkbox"/>	<input type="checkbox"/>		Add wrist rest for keyboard and/or pointing device	<input type="checkbox"/>
Is the user required to lean against the wrist rest to perform tasks?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Change wrist rest	<input type="checkbox"/>
If a laptop computer is used, are an external keyboard and pointing device provided?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Provide external devices	<input type="checkbox"/>
Monitor & Source Document	Y	N	N/A	Potential Fixes	✓
If a laptop computer is used, is an external monitor provided?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Provide monitor	<input type="checkbox"/>
Is the monitor located in front of the user?	<input type="checkbox"/>	<input type="checkbox"/>		Reposition monitor	<input type="checkbox"/>
Is the monitor approximately an arm's length (with fingers extended) away from the user?	<input type="checkbox"/>	<input type="checkbox"/>		Reposition monitor	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>		Lower or raise monitor	<input type="checkbox"/>
If a document holder is used, is it located adjacent to the computer screen?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Move document holder	<input type="checkbox"/>

Phone & Printer	Y	N	N/A	Potential Fixes	✓
Is the phone located on the same side as the hand that is used to answer it?	<input type="checkbox"/>	<input type="checkbox"/>		Move phone to opposite side	<input type="checkbox"/>
Can the phone be answered without extended reaching?	<input type="checkbox"/>	<input type="checkbox"/>		Move phone closer	<input type="checkbox"/>
Does the user talk on the phone while cradling it?	<input type="checkbox"/>	<input type="checkbox"/>		Add headset or speaker phone	<input type="checkbox"/>
Does the user utilize speakerphone or a headset while participating in conference calls?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Add headset or speaker phone	<input type="checkbox"/>
Can the printer be easily accessed?	<input type="checkbox"/>	<input type="checkbox"/>		Relocate printer	<input type="checkbox"/>
Work Surface	Y	N	N/A	Potential Fixes	✓
Is there sufficient space for all equipment and accessories?	<input type="checkbox"/>	<input type="checkbox"/>		Reorganize furniture	<input type="checkbox"/>
Are frequently used equipment and supplies within arm's reach?	<input type="checkbox"/>	<input type="checkbox"/>		Reorganize equipment	<input type="checkbox"/>
Is there a need for the work surface to be height adjustable?	<input type="checkbox"/>	<input type="checkbox"/>		Provide height-adjustable workstation	<input type="checkbox"/>
Workspace	Y	N	N/A	Potential Fixes	✓
Can the user move about the work space easily, without equipment, the CPU and/or supplies?	<input type="checkbox"/>	<input type="checkbox"/>		Organize work space	<input type="checkbox"/>
Is there adequate leg clearance (height, width, depth)?	<input type="checkbox"/>	<input type="checkbox"/>		Provide leg room	<input type="checkbox"/>
Is there sufficient storage and filing room to keep the work area free from clutter?	<input type="checkbox"/>	<input type="checkbox"/>		Provide more storage	<input type="checkbox"/>
Environment	Y	N	N/A	Potential Fixes	✓
Is lighting adequate for all tasks?	<input type="checkbox"/>	<input type="checkbox"/>		Provide task lighting	<input type="checkbox"/>
Is the monitor screen free of glare from overhead lighting?	<input type="checkbox"/>	<input type="checkbox"/>		Reduce overhead lighting	<input type="checkbox"/>
Is the monitor located perpendicular to windows or are windows heavily tinted?	<input type="checkbox"/>	<input type="checkbox"/>		Use blinds	<input type="checkbox"/>
Is equipment noise minimized at the source?	<input type="checkbox"/>	<input type="checkbox"/>		Reduce noise	<input type="checkbox"/>

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