

Workplace Ergonomics – Loss Control

Crippling injuries can afflict workers after prolonged exposure to awkward work positions, forceful and/or repetitive motions. Injuries such as: carpal tunnel, repetitive motion, and cumulative trauma.



Comprehensive Risk Assessment

from onsite consultations to virtual surveys



Education & Training

including streaming videos by industry and hazard type



Additional Resources Available

through a Loss Control consultant or an online library

These injuries, known as repetitive motion injuries, cumulative trauma injuries, and carpal tunnel syndrome, occur when workers repeat actions without adequate time for their bodies to rest or recover. These injuries do not require lifting or moving heavy objects; simply leaning over a workbench that is too low during an entire work shift every day for weeks, sawing or hammering continuously for hours every day, and inputting computer data nonstop for hours every day can cause them. These injuries often necessitate costly surgery, prolonged absence from work for rehabilitation, and perhaps reassigning workers to other tasks due to permanent disability.

While the anatomy, physiology, treatment and rehabilitation of these injuries can be complicated, preventing them can be easy and inexpensive by using good ergonomic practices. Ergonomics involves arranging work stations and tasks to minimize the stress they cause to workers' bodies. Good ergonomics not only helps prevent injury; it can also make your workers more productive by making tasks easier. This sheet addresses some basics of ergonomics; it is not all-encompassing. Your local chapter of the National Safety Council, OSHA, an industrial hygienist, or an ergonomist can provide in-depth guidance.

Ergonomics basics include:

For clerical workers who sit:

- Provide height-adjustable chair, adjustable desk, and/or adjustable keyboard holder so workers will not have to work with wrists, arms, back and neck at awkward angles
- Provide document holders so keyboard operators may view them at the same height as the computer screens to prevent holding neck at awkward angles
- Position computer screens within 15-20 degrees below the user's eye level
- Remind workers to take frequent momentary breaks to rest their necks, backs, eyes and wrists
- Position computer screens away from windows or lights that cause glare; provide glare filters as needed
- Provide foot rests for shorter workers who are unable to keep feet flat upon the floor
- Provide headphones to free the hands of workers who do much phone work

For workers who stand in place:

- Provide cushioned floormats and/or cushioned sole shoes to relieve fatigue
- Provide foot rests or foot rails so workers may relieve back stress periodically
- Provide height adjustable or tiltable workbenches & bins or items upon which to stand so workers may work at comfortable angles
- Place frequently used items in a semicircular pattern within 14-16 inches in front of workers, other items within 24-26 inches

For workers at jobsites:

- Provide tools with vibration/shock absorbing handles to reduce impact on hands
- Provide tools with ergonomically designed handles (e.g. pliers; wire cutters)
- Arrange work to avoid bending wrists-wrist strength is greatest when it is straight
- Use power tools when tasks place too much stress upon worker using hand tools
- Hold pistol handle tools (e.g. power drills) at elbow height when working upon vertical surface; below waist with elbow straight when working upon horizontal surface
- Provide flange or sleeve to rest hand on straight-line tools used for downward vertical force; this reduces force needed for gripping
- Remove sharp corners or edges from tool handles
- If needed, wear gloves that cover only the area needing protection; those covering unneeded areas can reduce dexterity and require greater strength to do the task
- Consider equipping tools having 1-finger start/stop devices (e.g. drill with trigger) with start/stop devices manipulated by several fingers or thumb to reduce stress on trigger fingers
- Provide non-slip handles for hand and power tools

For workers using machines on your premises or at jobsites:

- Keep the most frequently used control devices within easy reach (e.g. start/stop devices; raising/lowering levers)
- Locate control devices or guard them so they are not inadvertently operated
- Minimize the number of control devices to prevent confusion
- Position emergency controls within 30 degrees of operator's normal line of sight; make them conspicuous and easily accessible
- Design hand controls to move in direction workers expect (e.g. move joystick to the right to swing the machine to the right)
- Provide displays (e.g. tachometer; speedometer; pressure gauge) that show in contrast against their background and locate them to avoid glare
- Label displays conspicuously and design them to not be too similar to reduce confusion

General concepts for any task and location:

Practicing good ergonomics need not be costly. It can reduce injuries and in some cases increase worker productivity. Let workers' comfort guide them. Pain and fatigue indicate stress. Encourage workers to take momentary rest breaks often (perhaps as short as 10 seconds), to help recover from stress. Consider rotating workers: schedule #1 to task A for 2 hours and schedule her to task B for the following 2 hours. Observe your workers and the actions they take in their tasks. Notice pillows, self-made foot rests, etc.; these indicate workers feel discomfort.

Ask workers for their ideas about how to design their tasks to minimize stress. Workers may think ergonomic changes (e.g. adjustable chair

having back supports) are more uncomfortable at first; train workers how to use and adjust them and allow a few days to grow accustomed to them. Review the effectiveness of your ergonomic actions by speaking with workers, observing the presence of pillows, etc., and by reviewing injury/illness records; make changes as needed. Consult with an ergonomist, or health care professional for exercises your workers can perform to prevent injury.