

Ergonomics

Ergonomics (from the Greek word *ergon* meaning *work*, and *nomoi* meaning *natural laws*), is the science of refining the design of products to optimize them for human use. Ergonomics is sometimes known as human factors engineering.

Workers often perform tasks that involve exposure to ergonomic risk factors. Cumulative trauma disorders or CTDs (musculoskeletal and nervous system disorders) are the nation's most common and costly occupational health problem affecting hundreds of thousands of American workers, per OSHA.

CTDs are a type of injury that can take a long time to develop and are associated with more lost time and higher compensation costs than other type of injury. Exposure to risk factors can lead to the development of disabling injuries and illnesses that may prevent workers from returning to their jobs and/or performing simple tasks that are part of their everyday routine.

Prevention

The key to preventing CTDs begins with understanding how they occur. Below are the four most common factors that contribute to these injuries:

- Over flexion or extension (bending)
- Unnatural body positioning
- Repetitive movement
- Strain or force applied during the task

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The Good News

The good news is by applying the science of ergonomics - matching tools, equipment, and work methods to your job tasks you have the ability to reduce the risk of developing cumulative trauma disorders!

Maintenance Technicians

- Use the proper tool for the job to avoid awkward movements and the need for overexertion
- When using hand tools keep your wrists in a "neutral" position, as opposed to repeatedly bending them up, down or sideways during work tasks
- Pay attention to your posture
- Always use proper lifting techniques as back strain is one of the most common CTDs
- When appropriate, use back supports, wrist supports and other personal protective equipment that help prevent cumulative trauma
- Take a tip from professional athletes - do warm-up exercises before beginning physically demanding tasks

Office Workers

- Adjust the height of your chair or work station to reduce overextending your arms or back
- Move your computer monitor so your head and neck are positioned in a neutral position
- Take a short rest break when fatigue sets in - just a few minutes can make a difference
- Carefully stretch tired or overworked muscles to improve circulation and relieve tension