## What can employees do?

- Stretch before work, slowly and frequently throughout the day, and after an extended awkward posture or a lengthy task. Stretching increases flexibility and elasticity of muscles, increases circulation, and reduces fatigue.
- Know and work within your physical limitations and report injuries and ergonomic issues to your employer. Working through discomfort can result in loss of mobility and strength, and could lead to long-term injury.
- Stretch frequently throughout the workday. Use proper lifting techniques and get help for heavy or awkward objects. Protect your back!

## What can employers do?

Develop a comprehensive ergonomics program that includes:

- Making a commitment to employee safety and health; performing job hazard analyses to identify ergonomic risk factors for tasks, implementing ergonomic solutions to correct them, and observing employees using the corrected techniques.
- Training employees on the risk factors for musculoskeletal disorders and how ergonomics make work easier, more efficient, and safer.
- Involving employees in the implementation of the program and asking for their input. Enable employees working in an office environment to get up and walk around for a few minutes throughout the workday.
- Sustaining the program by incorporating it into the safety committee agenda or during tailgate meetings, and encouraging employees to report injuries like sprains and strains, and numbness.
- Keeping track of statistics on musculoskeletal disorder claims, direct and indirect costs, and analyzing the results and outcomes.

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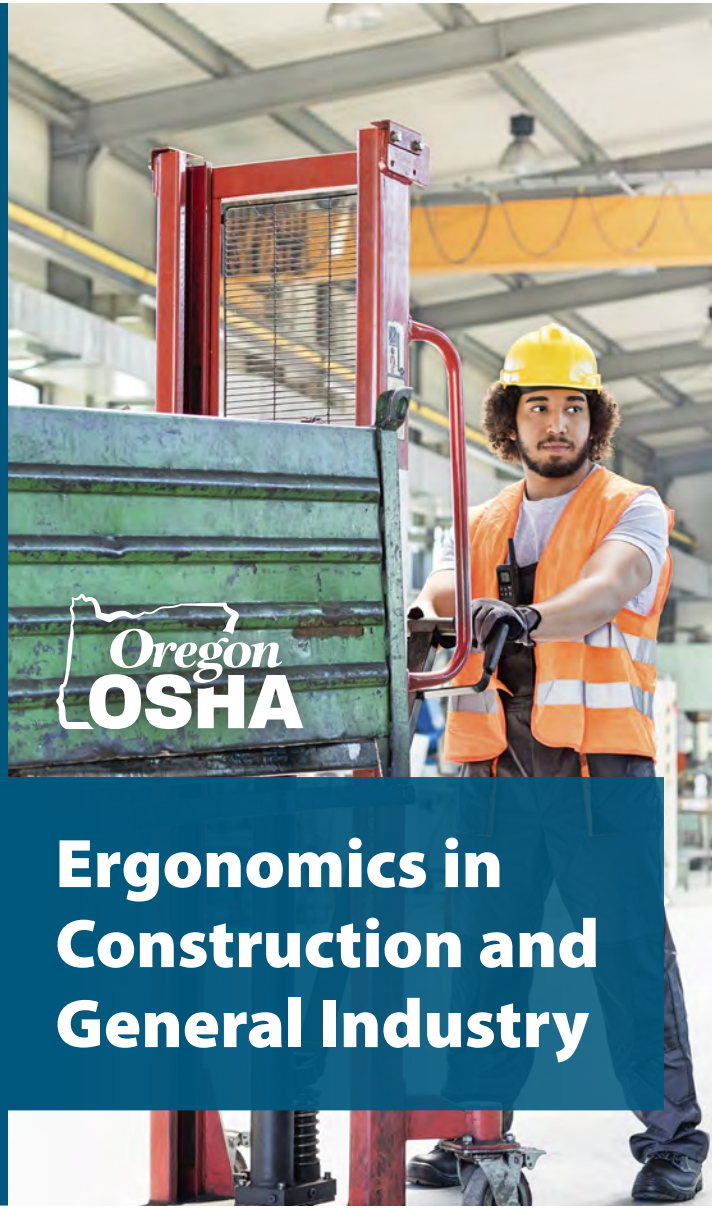


# Ergonomics in Construction and General Industry

440-5412 (11/18/COM)

Oregon OSHA

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# What is ergonomics and why is it important?

Ergonomics is the applied science of designing the work to fit the worker. Intense work frequently performed in an awkward or prolonged posture can cause fatigue, discomfort, and pain. Over time, it may lead to debilitating musculoskeletal disorders (MSDs). Musculoskeletal disorders are injuries and disorders that affect the human body's movement or musculoskeletal system (muscles, tendons, ligaments, nerves, discs, blood vessels, etc.). They can arise from a sudden exertion, or develop from repeatedly making the same bodily motion, as well as from repeated exposures to force, vibration, or awkward posture. Musculoskeletal disorders contribute to employee absenteeism and can be costly to treat. They are the single largest category of workplace injuries and are responsible for almost 30 percent of all worker's compensation costs nationally. Adjusting the job to the worker to reduce or eliminate awkward and prolonged postures can save employers the financial costs of these commonly disabling claims, and improve worker productivity and morale.

## Ergonomics in action

Work above shoulder height or below the knees, repetitive tasks, over-extending, prolonged awkward postures, vibrations, sudden movement, extreme temperatures, impact loading, and heavy lifting put employees at a greater risk of musculoskeletal disorders. Construction and manufacturing or assembly-type workers are especially susceptible to musculoskeletal disorders like sprains, strains, back pain, tennis elbow, and carpal tunnel syndrome. The risk of injury is greatly reduced when work is performed between shoulder and elbow height in a natural and neutral posture.


## Some examples of ergonomic best practices

- Get help when lifting loads that are 35 to 40 pounds or when lifting large, awkward objects. Avoid lifting any load heavier than 50 pounds or lifting heavy objects above shoulder level. Use lifting tools to avoid bending over. Use proper lifting techniques; keep your back straight and the load close to your body, squat by bending at the knees, and lift by straightening your legs and avoiding twisting or turning.
- Use carts, dollies, or mechanical handling equipment to move materials and objects over distances instead of carrying by hand.
- When working above the shoulders or below the knees, adjust the working height (table or work bench) when possible to suit the worker, or use tool extensions to keep hands between the shoulders and elbows. For overhead work, consider working from a platform instead of a ladder.
- Use knee pads or a mat when kneeling is unavoidable.
- Use anti-fatigue mats, chairs, or sit/stand stools when work requires standing on hard surfaces for long periods of time. In office environments, use sit/stand work stations and foot rests, and occasionally stand up and walk for a few minutes throughout the day.
- Select, properly use, and maintain the right tools for the job and the right tool for the worker:
  - Pistol-grip tools work well for applying force in a horizontal direction, while inline-grip tools work best when applying force in a vertical direction. The best tool for the job will allow the wrist to maintain a neutral posture.
  - Use tool handles that are the proper length and diameter to reduce soft tissue compression. Tools with padded, textured handles provide good grip and reduce effort needed to effectively use the tool and prevent slippage. Avoid using tools with highly polished or glossy-coated handles.
  - For manufacturing, assembly, or fabrication operations, consider using pneumatic power tools instead of electric power tools, depending on tool weight, torque, balance, etc.
  - Maintain power tools regularly and make sure they are kept in good condition. Ensure grinding tools always have good grinding pads. Keep bits, blades, and similar tooling sharp; use custom grip-kits to reduce the force required to operate the tool and reduce vibration and contact stress.