

# Ergonomics

Ergonomics covers all aspects of a job, from the physical stress it places on joints, muscles, nerves, tendons, bones and the like, to environmental factors which can affect hearing, vision, and general comfort and health.

Everyone has heard of *carpal tunnel syndrome* (CTS). CTS is one of many types of *repetitive motion injuries* (RMI's) caused by long-term and repetitive use of awkward postures, combined with forceful exertion. Working with the hands above shoulder level, reaching behind the back, bending the wrists, or grasping or pinching objects can increase the "wear and tear" on the body. Muscles, tendons, joints, nerves, and blood vessels can be affected.

RMI's can be prevented through ergonomics, the science of finding ways to make tasks easier on the body. Many of these strategies involve adjusting the way a worker performs a job, including using protective equipment, the correct tools, and proper techniques.



## Eight Ergonomic Strategies

You can lessen the chance of incurring an RMI by using your body in the safest and most efficient way. Here is how:

1. Keep your wrist straight when grasping objects or using tools.
2. Use your whole hand (power grip) when grasping objects.
3. Keep your elbows bent and close to your sides as you work.

4. Use your whole arm and don't lock your elbows when you reach, push, or pull.
5. Use tools that allow you to keep your wrists straight while maintaining comfortable, positive control.
6. Lift safely from your knees, not your waist.
7. Equipment should be positioned so that tasks can be performed comfortably; furniture should be adjusted and arranged to minimize strain on all parts of the body.
8. Keyboards should be tilted to a comfortable angle that allows access to all keys. Wrists should be as straight as possible and elbows at a 90-degree angle so the operator's hands and lower arms are parallel to the floor.

## Conditioning Exercises to Prevent RMI's

1. Neck Flex – Relax your shoulders. Turn head slowly to right, then to left, as far as you can without discomfort. Next tilt your head slowly to right, and then to left, as far as you can without discomfort. Repeat five times.
2. Wrist Flex – Extend your wrist and fingers. Slowly bend wrist downward until your hand forms a right angle with your forearm. Then bend your wrist as far back as you can. Repeat five times with each hand.
3. Clench and Fan – With your wrist held straight, make a fist and hold it for five seconds. Release and spread your fingers, and hold for five seconds. Repeat five times with each hand.
4. Lower Back Stretch – Stand in front of a chair with feet slightly parted. Place hands on arms of chair and slowly bend forward as far as you can without discomfort, placing your weight on your hands. Stretch your lower back and hold for five seconds. Repeat five times.

***When we share the responsibility for safety in the workplace, everyone wins!!***