Workplace Ergonomics

Since ancient times, people have known that movement is an essential part of life. Today, however, a typical office worker sits at a desk for eight hours a day—probably with poor posture—and seldom stands up. Whenever the requirements of a job do not match the physical attributes of a worker, the worker is more prone to injury and lost productivity.

Workplace injuries, a common cause of time off, cost employers and employees billions of dollars every year. Some of the more common workplace injuries are carpal tunnel syndrome (a nerve entrapment at the wrist seen in computer users), low-back pain, tendinitis, bursitis, and neck pain or headaches.

What Causes Workplace Injuries?

Many workplace injuries are called repetitive stress injuries or cumulative-trauma disorders. These injuries occur when abnormal stresses are repeatedly placed on normal joints by poor posture or poor joint position during the performance of a task.

Many of these stresses are caused by poor workstation design and/or repetitive task performance. In addition, poor posture at the workstation can also be detrimental. For example, prolonged use of a computer or a mouse, particularly when the work area is not designed well, can lead to carpal tunnel syndrome and/or neck and arm pain.

Many modern product manufacturers are designing their products ergonomically, mixing form with function. Such products blend in easily with the worker's actions while on the job and make tasks safer and easier to perform.

What Are Good Ergonomics?

According to the United States Department of Health and Human Services, ergonomics is the science of fitting workplace conditions and job demands to employee capabilities. An ergonomic assessment of the workplace critically appraises the physical work environment— followed by changes based on the assessment. Ergonomic principles are then used to make the workplace compatible with the employee, improving the employee's safety and productivity. In other words, the
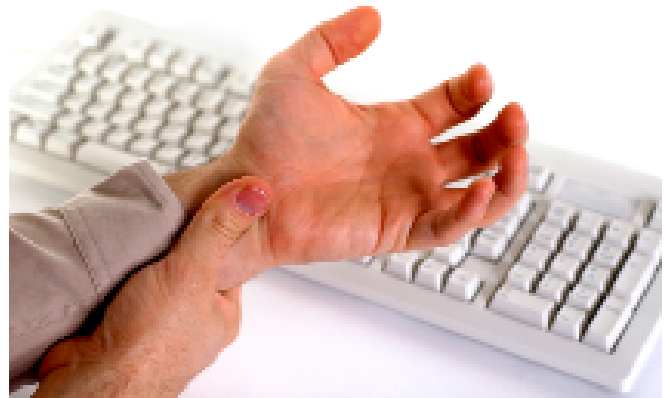
Don't rest your arm on the edge of the desk while manipulating the mouse.

easier it is to do a job, the more productive and happy the worker will be.

Prolonged use of a computer or a mouse, particularly when the work area is not designed well, can lead to carpal tunnel syndrome and/or neck and arm pain.

When considering the impact of proper ergonomics on workplace safety, three basic principles are especially important:

1. When lifting, the largest muscles in the area should perform the task. The larger the muscle or muscle group used for lifting, the lower the stress placed on smaller, more vulnerable muscles.

2. During any work activities, people should be able to comfortably assume a number of different postures and not remain in one position for an extended time. Muscles will fatigue and be more prone to injury when assuming a particular posture, especially a poor one (e.g., partially bent forward at the waist).

3. When performing tasks, it is important to keep the joints either in their neutral posture or approximately halfway into the range of motion. Working with your joints at the extremes of their ranges of motion for prolonged periods places abnormal stress on them and can cause repetitive stress injuries.

Workplace Adjustments

When working at a desk, try these suggestions for greater comfort:

• Choose a desk that is the proper height. All things on your desk should be within easy reach.

• Your feet should be touching the floor, with the legs and body forming an angle of 90 to 110 degrees.

• Keep your body straight with the head and neck upright and looking forward, not to the side. Do not hunch over or slouch.

• Adjust the height of your monitor. Look forward with your head in a neutral position. Your eyes should be at the same height as the top of the monitor. Leaning your head forward can lead to headaches and neck pain.

• When typing, keep your wrists straight, your shoulders perpendicular to the floor, and your forearms parallel to the floor.

• When reading at your desk, use a bookstand or a paper holder to keep your eyes in the same neutral position you use to read documents on your computer monitor.

• When talking on the phone, use a headset, when possible, especially if you talk on the phone for prolonged periods. Holding the phone between your shoulder and cheek will only lead to neck pain and headaches.

• Stand up and stretch your legs with a short walk about every 20 to 30 minutes.

• Take micro-breaks often, stretching your neck, arms and wrists, back, and legs. Simple stretches include neck rotations, fist clenches, arm dangles, and shoulder shrugs.

Ergonomic Tips

When lifting...
- When lifting from the floor, keep your back straight and lift with the legs. Do not bend over at the waist and lift with the muscles of the low back. Your body is more easily injured in this position.
- Keep the object being lifted close to your body.
- Keep your elbows flexed.
- Keep your head up and your neck straight as you lift.

When working with a computer mouse...
- Don't move the mouse with just your wrist. Use your entire arm and shoulder.
- Don't rest your arm on the edge of the desk while manipulating the mouse.
- Hold the mouse loosely.
- Keep your wrist relaxed. Don't hold it up or down; instead, hold it in a neutral (straight) position
- Move away from the mouse several times per hour and move your wrists, arms, and shoulders around.

• If your eyes concentrate on a particular object for long periods, relax your eye muscles by shifting your focus from objects that are close to you to objects that are farther away. This helps reduce eye strain. ◼

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