# Ergonomics Safety Talk

## WHAT’S AT STAKE?

**DEFINITION**

Ergonomics is the process of designing or arranging furniture, products, systems and devices so that they fit the people that use them to minimize the risk of injury or harm as a result. The aim is to create a comfortable, safe and productive workspace by bringing together health and design, with positioning and adjustment based on thing such as: Body size, Height, Strength, Skill, Speed, Sensory abilities (vision, hearing)

**GOAL**

The goal of ergonomics (i.e. the scientific study of people at work) is to prevent soft tissue injuries and musculoskeletal disorders (MSDs) caused by sudden or sustained exposure to force, vibration, repetitive motion, and awkward posture. To create an ergonomically sound work environment, NIOSH ergonomists and industrial hygienists recommend designing tasks, work spaces, controls, displays, tools, lighting, and equipment to fit employee’s physical capabilities and limitations.

**Work Days Lost**

Every year, over 6.9 million working days are lost as a result of musculoskeletal disorders and generally progress over a period of time, especially in those who tend to endure prolonged sitting positions or repetitive motions.

## WHAT’S THE DANGER?

**CAUSES OF MSDS**

Prolonged exposure to ergonomic risk factors can cause MSDs. Conditions likely to cause MSD problems include:

- Exerting excessive force.
- Excessive repetition of movements that can irritate tendons and increase pressure on nerves.
- Awkward postures, or unsupported positions that stretch physical limits, can compress nerves and irritate tendons.
- Static postures, or positions that a worker must hold for long periods of time, can restrict blood flow and damage muscles.
- Motion, such as increased speed or acceleration when bending and twisting, can increase the amount of force exerted on the body.
- Compression, from grasping sharp edges like tool handles, can concentrate force on small areas of the body, reduce blood flow, nerve transmission and damage tendon sheaths.
- Inadequate recovery time due to overtime, lack of breaks and failure to vary tasks, leave inadequate time for tissue healing

MSDs can affect nearly all tissue in the body: nerves, tendons, tendon sheaths and muscles. The most frequently affected areas of the body are arms and the back.

**COMMON SYMPTOMS OF ERGONOMIC INJURIES**

Ergonomic problems most commonly arises in a person’s neck, shoulders, back, or extremities. Depending on the condition, common symptoms can include:

- Tingling or numbing
- Dull and aching, sharp and stabbing, or burning pain
- Muscle weakness, decreased grip strength, or cramping
- Loss of coordination
- Decreased range of motion or discomfort
- Coldness or discoloration of the affected area
- Swelling of inflammation
- Joint stiffness
- Visual fatigue
- Blurred vision
- Burning or watery eyes
- Frequent headaches

# HOW TO PROTECT YOURSELF

**PREVENTION THROUGH ERGONOMICS**

In recent years, potential ergonomic problems have become a major concern in many business environments. Many facilities are now devoting significant time and effort to controlling the twisting, turning, stretching, and other motions that place stress and strain on employees' bodies.

**Risk Analysis**

Assessing work-related hazards and minimizing injury risk is a critical part of controlling the cost of work-related injuries, keeping employees healthy, and returning injured employees to work faster. It is also a critical part of optimizing the selection and integration of new technology into the workplace in addition to identifying training requirements.

**The following are important elements of an ergonomic process:**

- **Provide Management Support –** A strong commitment by management is critical to the overall success of an ergonomic process. Management should define clear goals and objectives for the ergonomic process, discuss them with their workers, assign responsibilities to designated staff members, and communicate clearly with the workforce.
- **Involve Workers –** A participatory ergonomic approach, where workers are directly involved in worksite assessments, solution development and implementation is the essence of a successful ergonomic process. Workers can:
- Identify and provide important information about hazards in their workplaces.
- Assist in the ergonomic process by voicing their concerns and suggestions for reducing exposure to risk factors and by evaluating the changes made as a result of an ergonomic assessment.
- **Identify Problems –** An important step in the ergonomic process is to identify and assess ergonomic problems in the workplace before they result in CTDs.

- **Encourage Early Reporting of CTD Symptoms –** Early reporting can accelerate the job assessment and improvement process, helping to prevent or reduce the progression of symptoms, the development of serious injuries, and subsequent lost-time claims.
- **Implement Solutions to Control Hazards –** There are many possible solutions that can be implemented to reduce, control or eliminate workplace CTDs.
- **Evaluate Progress –** Established evaluation and corrective action procedures are required to periodically assess the effectiveness of the ergonomic process and to ensure its continuous improvement and long-term success. As an ergonomic process is first developing, assessments should include determining whether goals set for the ergonomic process have been met and determining the success of the implemented ergonomic solutions.

**Dos & Don’ts**

Think your work station might be contributing to your pain problems:

**DO** keep moving. Set an alarm to remind you if you need it! Sitting for long periods wreaks havoc on your spine and circulation. Get up, stretch, MOVE!

**DO** try to keep your body in a neutral posture, which creates the least strain on your body.

**DO** keep your desk clear so you’re not forcing your body to work awkwardly around clutter.

**DON’T** keep your monitor too close or too far away, or hunch over a laptop. This can cause eye strain and headaches in addition to neck and back pain.

**DON’T** use a desk or chair that’s not the proper height for your size. Everyone is different; find what works for you.

**DON’T** cradle your phone between your shoulder and ear.

**DO** wear a headset if a good portion of your day is spent on the phone.

**DO** invest in workstation essentials that are ergonomic, and make sure they are adjusted to where you need them to be.

- Look for an office chair with proper lumbar support that adjusts to your body.
- A laptop raiser positions your laptop for optimum ergonomics while relieving eye and neck strain.
- A monitor arm makes it easy to adjust the height and position of your monitor to reduce upper back and neck pain.
- Use a footrest to reduce lower back pressure and increase blood flow.
- A bright, adjustable light can reduce headaches, eye fatigue and neck strain.
- Or try a standing desk to keep you moving! Less time spent sitting means less stress on your spine while increasing circulation and mental alertness.

# FINAL WORD

Your body is not a “tool” that you can easily replace. If you injure your body, it could have lifelong negative consequences for you at work and in your non- work life. Treat it with kindness and intelligence.