Ergonomics is the science of fitting jobs to the people who work in them. The goal of an ergonomics program is to reduce work-related musculoskeletal disorders (MSDs) developed by workers when a major part of their jobs involve reaching, bending over, lifting heavy objects, using continuous force, working with vibrating equipment and doing repetitive motions.

What are signs and symptoms of MSDs that you should watch out for?

Workers suffering from MSDs may experience less strength for gripping, less range of motion, loss of muscle function and inability to do everyday tasks. Common symptoms include:

- Painful joints
- Pain in wrists, shoulders, forearms, knees
- Pain, tingling or numbness in hands or feet
- Fingers or toes losing normal color
- Shooting or stabbing pains in arms or legs
- Back or neck pain
- Swelling or inflammation
- Stiffness
- Burning sensation

What are MSDs?

MSDs are injuries and illnesses that affect muscles, nerves, tendons, ligaments, joints or spinal discs.

Your doctor might tell you that you have one of the following common MSDs:

- Carpal tunnel syndrome
- Rotator cuff syndrome
- De Quervain's disease
- Trigger finger
- Sciatica
- Epicondylitis

- Tendonitis
- Raynaud's phenomenon
- Carpet layers’ knee
- Herniated spinal disc
- Low back pain
- Hand-arm Vibration Syndrome
- Tension neck syndrome

What causes MSDs?

Workplace MSDs are caused by exposure to the following risk factors:

**Repetition**

Doing the same motions over and over again places stress on the muscles and tendons. The severity of risk depends on how often the action is repeated, the speed of the movement, the number of muscles involved and the required force.

**Forceful Exertions**

Force is the amount of physical effort required to perform a task (such as heavy lifting) or to maintain control of equipment or tools. The amount of force depends on the type of grip, the weight of an object, body posture, the type of activity and the duration of the task.

**Awkward Postures.** Posture is the position your body is in and affects muscle groups that are involved in physical activity. Awkward postures include repeated or prolonged reaching, twisting, bending, kneeling, squatting, working overhead with your hands or arms, or holding fixed positions.

**Contact Stress**

Pressing the body against a hard or sharp edge can result in placing too much pressure on nerves, tendons and
blood vessels. For example, using the palm of your hand as a hammer can increase your risk of suffering an MSD.

Vibration

Operating vibrating tools such as sanders, grinders, chippers, routers, drills and other saws can lead to nerve damage.

If you have signs or symptoms of MSDs...

If MSD signs and symptoms are not reported early, permanent disability may result. It is important that you report MSD signs and symptoms right away to avoid long-lasting problems. Your employer is required to respond promptly to those reports. Contact the following person to report MSDs, MSD signs or symptoms or MSD hazards.

Name                        Phone