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## Ergonomics: Understanding Musculoskeletal Injuries

A musculoskeletal injury (MSI) is an injury or disorder of the muscles, tendons, ligaments, joints, nerves, blood vessels or related soft tissue arising from exposure to risk factors such as awkward postures, repetitive motions and forceful exertions.

The following are some of the most common MSIs:

- **Tendonitis** - inflammation of the tendons
- **Tenosynovitis** - inflammation of the synovial sheath
- **Carpal Tunnel Syndrome** - results when the median nerve is compressed, either from the swelling of tendons and sheaths or from repeated bending of the wrist

Risk factors that may lead to MSIs are:

- **Repetition** - long or concentrated hours of repetitive motion including typing
- **Posture** - long hours of sitting in the same position while typing, especially if it is in an uncomfortable or poorly supported position
- **Lack of Rest** - intensive hours at the keyboard with few breaks

Symptoms of MSIs:

- Tingling or numbness in the hands or fingers
- Pain in fingers, hands, wrists, or even shooting up into the arms or forearms
- Loss of strength or coordination in the hands
- Numbness or discomfort in the hands which wakes you up at night

Stages of cumulative MSIs:

**Stage 1:** Mild discomfort, present while working but disappears when not working. Does not affect work performance or daily living tasks.

**Stage 2:** Pain is present while working and continues when not working. Begins to affect daily living tasks.

**Stage 3:** Pain is present all the time. May not be able to complete simple daily tasks.

The best prevention is to limit the time you spend doing the same motion over and over.

### Remember

The earlier you identify a repetitive motion problem, the more likely you are correct the problem.

Report discomfort, pain or numbness to your supervisor immediately.

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