

# SAFETY MEETING TOPIC: Musculoskeletal Disorders (MSD) Part 1

## OSHA Standard: General Duty Clause 5(a)(1)

Musculoskeletal disorders (MSDs) are a group of painful disorders of muscles, tendons, and nerves. Carpal tunnel syndrome and tendonitis are very common examples. Work activities that are frequent and repetitive, or activities with awkward postures may cause these disorders which may be painful during work or at rest.

Almost all work requires the use of the arms and hands. Therefore, most MSD affect the hands, wrists, elbows, neck, and shoulders. Work using the legs can lead to MSD of the legs, hips, ankles, and feet. Some back problems also result from repetitive activities.

MSDs arise from ordinary arm and hand movements such as bending, straightening, gripping, holding, twisting, clenching and reaching. These common movements are not particularly harmful in the ordinary activities of daily life. What makes them hazardous in work situations is the continual repetition, often in a forceful manner, and most of all, the speed of the movements and the lack of time for recovery between them.

What are the risk factors for MSDs?

- Body Position
- Repetition
- Force
- Pace of Work

MSDs do not happen as a result of a single accident or injury. Rather, they develop gradually as a result of repeated trauma. Excessive stretching of muscles and tendons can cause injuries that only last a short time. But repeated episodes of stretching causing tissue inflammation can lead to long-lasting injury or MSDs.

MSDs include three types of injuries:

- Muscle injury
- Tendon injury
- Nerve injury

MSDs may progress in stages from mild to severe.

- Early stage: Aching and tiredness of the affected limb occur during the work shift but disappear at night and during days off work. No reduction of work performance.
- Intermediate stage: Aching and tiredness occur early in the work shift and persist at night. Reduced capacity for repetitive work.
- Late stage: Aching, fatigue, and weakness persist at rest. Inability to sleep and to perform light duties.

Not everyone goes through these stages in the same way. In fact, it may be difficult to say exactly when one stage ends and the next begins. The first pain is a signal that the muscles and tendons should rest and recover. Otherwise, an injury can become longstanding, and sometimes, irreversible. The earlier people recognize symptoms, the quicker they should respond to them.

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