

Musculoskeletal disorders (MSDs)

What are musculoskeletal disorders (MSDs)

Musculoskeletal disorders (MSDs) are injuries and disorders of the soft tissues (muscles, tendons, ligaments, joints, and cartilage), spinal discs, and nervous system. They can affect nearly all tissues, including the nerves and tendon sheaths, and most frequently involve the arms and back.

Occupational safety and health professionals refer to these disorders by a variety of names, including cumulative trauma disorders (CTDs), repeated trauma, repetitive stress injuries (RSIs), and occupational over-exertion syndrome. These painful and often disabling injuries develop gradually over weeks, months, and years. MSDs usually result from exposure to multiple risk factors that can cause or exacerbate the disorders, not from a single event or trauma such as a slip, trip, fall, collision, or entanglement.

MSDs can cause a number of conditions, including pain, numbness, tingling, stiff joints, difficulty moving, muscle loss, and sometimes paralysis. Frequently, workers lose time from work to recover; some never regain full health.

These disorders include:

- Carpal tunnel syndrome
- Trigger finger
- Tendinitis
- Herniated spinal disc
- Tension neck syndrome
- Rotator cuff-syndrome
- Sciatica
- Reynaud's syndrome
- Low back pain
- DeQuervin's disease

What are musculo-skeletal disorders (MSDs)?

ERGONOMICS: A STEP-BY-STEP PROGRAM DEVELOPER

- Epicondylitis
- Carpet layer's knee
- Hand-arm vibration syndrome (HAVS)

The following areas of the body exposed to risk factors have been associated with MSDs:

- Neck
- Shoulder
- Elbow
- Forearm
- Wrist
- Hand
- Abdomen (hernia only)
- Back
- Knee
- Ankle
- Foot

MSDs may include muscle strains and tears, ligament sprains, joint and tendon inflammation, pinched nerves, and spinal disc degeneration.

These disorders are diagnosed by a medical history, physical examination, or other medical tests and can range in severity from mild and intermittent to debilitating and chronic. Some of the disorders with several distinct features (such as carpal tunnel syndrome) are defined primarily by the location of the pain (i.e., low back pain).

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Why are work-related musculoskeletal disorders a problem?

There are many reasons for considering work-related MSDs a problem, including the following:

- They are among the most prevalent lost-time injuries and illnesses in almost every industry.
- MSDs, specifically those involving the back, are among the most costly occupational problems.
- Job activities that may cause musculoskeletal disorders span diverse workplaces and job operations.
- They may cause a great deal of pain and suffering among afflicted workers.
- Work-related MSDs may decrease productivity and the quality of products and services. Workers experiencing aches and pains on the job may not be able to do quality work.
- Because musculoskeletal disorders have been associated with non-work activities (e.g., sports) and medical conditions (e.g., renal disease, rheumatoid arthritis), it is difficult to determine the proportion due solely to occupation. For example, in the general population, nonoccupational causes of low back pain are probably more common than workplace causes. However, even in these cases, the musculoskeletal disorders may be aggravated by workplace factors.

Musculoskeletal disorders: Employer and employee information

The following information may be used for employee MSD training. “Ergonomics: What employees need to know” covers basic information that employees need to know for the early identification of musculoskeletal disorders.

Note: You may reproduce this information to use during MSD training sessions.

Following “Ergonomics: What employees need to know,” you will find detailed information on common musculoskeletal disorders. The first part of every MSD topic provides in-depth information for the employer or trainer. The second part of the MSD topic is briefer and may be copied and used as an employee informational handout.

**Musculo-
skeletal
disorders:
Employer
and
employee
information**