

Musculoskeletal disorders (MSDs)— Risk factors

List MSD hazards on site.

Explain dangers

Musculoskeletal disorders (MSDs) are injuries of the muscles, nerves, tendons, ligaments, joints, cartilage, or spinal discs. MSDs do not include musculoskeletal injuries that are the direct result of a fall, a struck-by or struck-against event, vehicle collision, violence, etc.

Some recognized risk factors for MSDs are:

1) Forceful exertion

- Force is the amount of effort required to perform a task or job.
- Lifting, pushing, pulling, and gripping a tool are examples of activities that require you to exert force or muscle effort.

2) Repetitive movements

- Movements performed over and over are called repetitive movements.
- Nailing a deck, screwing drywall, and tying rebar are examples of repetitive tasks.

3) Awkward postures

Awkward postures are those in which joints are held or moved away from the body's natural position. Examples are stooping (bending over), kneeling, and reaching overhead.

4) Secondary risk factors

- **Contact pressure** is any external pressure applied to soft tissues of the body. Holding tools where handles press into parts of the hand is an example of contact pressure.
- **Vibration** can cause damage to nerves and blood vessels as well as other soft tissues.

Identify controls

Two approaches are widely accepted for preventing MSDs. The preferred approach is to design the job to the capabilities and limitations of the workforce.

1. Engineering Controls

Engineering controls are measures taken to physically modify the forcefulness, repetitiveness, awkwardness, or vibration levels of a job. Examples include modifying the workstation layout as well as selecting and using tools, work materials, and work methods that will reduce MSD risk.

2. Administrative Controls

Administrative controls are management-directed work practices and policies to reduce or prevent exposures to risk factors. Administrative control strategies include changes in job rules and procedures such as more rest breaks, job rotation, and training.

Although engineering controls are preferred, administrative controls can be helpful as temporary measures until engineering controls can be implemented or when engineering controls are not technically feasible.

Demonstrate

Ask the crew to describe any tasks that can contribute to MSDs and any solutions that can reduce the risk of MSDs.