

Work Safe for Life

Musculoskeletal hazards and controls

HOMEBUILDING: PLUMBING

Photocopy this profile and distribute it as widely as possible!

Musculoskeletal disorders (MSDs), such as chronic back pain or shoulder problems, often take time to develop. Prolonged exertion, awkward positions, hand-arm and whole-body vibration, contact stress, and repetitive tasks can add up over time to produce an MSD.

This profile can help you identify and control MSD hazards in your job. We recommend that you add the best practices outlined here to your company's health and safety program. The hazards in a particular job, however, may be different than the ones on this profile, so evaluate the risks of your particular activities.

In general, when implementing controls, consider the following ergonomic principles:

- 1. Use tooling equipment when possible.** The most effective intervention to control the risk of developing an MSD is to eliminate or reduce the frequency of lifting, carrying, pushing, and pulling. Use power-driven equipment such as carts, dollies, pallet jacks, or manual forklifts.
- 2. Don't lift a load from the floor.** Lifting from the floor or below standing knee-height can expose your back to significant stresses and reduce your lifting capacity. Avoid this procedure by storing objects above standing-knee-height and below standing-shoulder height.
- 3. Avoid working on the floor.** Consistently working on the floor can result in injuries to your back, ribs, and knees because it usually requires kneeling and bending your back forward. When possible, raise the work height by using a workbench.
- 4. Minimize work above your shoulder.** High lifting or constant reaching above the shoulder level is harmful for three reasons.
 1. Your muscle strength is reduced because most of the muscle work is performed by your shoulders and arms instead of by the bigger muscles in your back and legs.
 2. Your shoulder and arm muscles fatigue more quickly than your back and leg muscles because of reduced blood flow.
 3. Lifting or removing an object from a high shelf can be dangerous because you could drop the object.
- 5. Move smaller weights often or get help.** Smaller weights put less stress on your back than larger weights, even if the frequency of lifting is increased.
- 6. Exercise programs.** Consider exercise programs. They help to prevent MSDs and promote general good health.

This profile created by the Infrastructure Health and Safety Organization can help plumbers identify MSD hazards in their job and how to control them.