

Musculoskeletal disorders (MSDs)—Controls

Explain dangers

Musculoskeletal disorders (MSDs) are injuries of the muscles, nerves, tendons, ligaments, joints, cartilage, or spinal discs.

Risk factors for MSDs include:

1. **Forceful exertion** (e.g., lifting, pushing, pulling, and gripping a tool)
2. **Awkward postures** (e.g., stooping, bending over, kneeling, and reaching overhead)
3. **Repetitive movements** (e.g., nailing a deck, screwing drywall, and tying rebar)
4. **Secondary risk factors:**
 - Contact pressure
 - Vibration
 - Poor fitting or restrictive gloves
 - Working in cold or hot temperatures

Identify controls

MANUAL HANDLING OF TOOLS AND MATERIALS

- Plan ahead to minimize material handling.
- Use carts, dollies, hoists, or other mechanical handling devices.
- Use ladder hoists, gin poles, daisy chains, or cranes to move materials on or off roofs.
- Use chain falls, motorized buggies, carrying handles, or extension handles for carrying large or awkward materials such as drywall.
- Break loads into smaller units. For instance, put cement in bags weighing less than 50 lb.
- Use shoulder pads when carrying loads on shoulders.
- Exercise and stretch before starting work.
- Label materials with their weight.
- Get another person to help you lift heavy objects or awkward loads.
- Use proper lifting techniques. Lift with your legs, do not bend over and lift with your back, and keep the load close to your body.

WORKING WITH HAND TOOLS

- Use handles that are more comfortable and give you a better grip.
- Maintain your power tools regularly so that they run with low vibration.
- Select hand tools that are designed for a neutral wrist posture and that reduce the amount of force required.
- Use tools that are low torque, low kickback, and lightweight.
- Use vibration-absorbing padding on grips and handles.

WORKING AT GROUND OR FLOOR LEVEL

- Use tables, benches, or stands to bring work to waist height.
- Store materials at waist height.
- Change positions (e.g., sit, stoop, or kneel with kneepads).
- Use pipe stands on pipe and steam fitting jobs, D-handles or longer handles for shovelling, rebar-tying devices, stand-up fastening systems for roof insulation, rug rippers, carpet stretchers, and pipe/conduit benders.

KNEELING

- Use high-quality kneepads.
- Wear pants with kneepad pockets.
- Take short rest and stretch breaks.

WORKING OVERHEAD

- Use drywall lifts, materials lifts, duct jacks, scissors lifts, and extension poles or stands for tools when doing overhead work.
- Make use of adjustable scaffolds, aerial work platforms, or other work platforms to decrease awkward postures.

Demonstrate

Ask your crew to share ideas about how to reduce the risk of MSDs.