

INDUSTRIAL, COMMERCIAL, INSTITUTIONAL: DRYWALL

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Musculoskeletal disorders (MSDs), such as chronic back pain or shoulder problems, often take time to develop. Forceful 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 handling 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 material-handling 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 knuckle height can expose your back to significant stresses and reduce your lifting capacity. Avoid this procedure by storing objects above standing knuckle height and below standing shoulder height.
- 3. Avoid working on the floor.** Constantly working on the floor can result in injuries to your back, hips, 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.

Tasks	What can happen (Hazards/Risks)	Potential Controls
<p>Material handling drywall sheets</p> <ul style="list-style-type: none"> ▶ Moving drywall and accessories to the installation area 	<ul style="list-style-type: none"> ▶ Back and shoulder injury from repeated handling of heavy drywall sheets 	<ul style="list-style-type: none"> ▶ Use material handling devices such as carts, dollies, and boom trucks to assist with material handling of drywall sheets. ▶ If possible, place or store drywall near the installation area (e.g., on the same floor as the installation). ▶ If possible, use a tool that can safely grip the drywall and allow you to lift and carry the gypsum board easily with one hand. ▶ Move one sheet at a time. ▶ Get help moving sheets.
<p>Installing drywall sheets</p> <ul style="list-style-type: none"> ▶ Placing/hanging drywall onto ceilings and vertical walls 	<ul style="list-style-type: none"> ▶ Back and shoulder injury from repeated handling of heavy drywall sheets ▶ Wrist, hand, and elbow injury from repetitive hammering and using a “pinch grip” when handling drywall sheets 	<ul style="list-style-type: none"> ▶ Use two people to lift long sheets of drywall. ▶ If possible, for situations when you’re working alone or working on a tall ceiling (greater than 8 ft or 2.4 m), use a pneumatic or manual panel lift for overhead work. ▶ Use proper scaffolding when installing drywall on walls two-storeys high. To help you move the drywall onto the scaffold, use a tool that can safely grip the drywall and allow you to carry the gypsum board easily with one hand. ▶ Whenever possible, use a power-elevated work platform to assist with installing drywall. ▶ Ensure that cutting knives and other tools are sharp and in good shape. When cutting drywall board, wear gloves to prevent cuts to your fingers and palm. ▶ Use ergonomically designed knives to reduce hand and wrist exertion. ▶ Pick up garbage and scrap materials as you go. Distribute garbage bins around your site and empty them regularly. Good housekeeping prevents slips, falls, and overexertion injuries.
<p>Drywall finishing</p> <ul style="list-style-type: none"> ▶ Taping ▶ Applying compound ▶ Sanding 	<ul style="list-style-type: none"> ▶ Overexertion injuries from prolonged exposure to awkward shoulder, neck, and back positions 	<ul style="list-style-type: none"> ▶ Use wheel castors, carts, or dollies to help you carry and move materials whenever possible. ▶ Keep your body in proper balance and in a comfortable position when performing work tasks. Tools and materials should be within arm’s-reach. ▶ Mechanical compound applicators such as mud boxes and angle finishers should be the correct length and have ergonomically designed handles.

Tasks	What can happen (Hazards/Risks)	Potential Controls
	<ul style="list-style-type: none"> ▶ Shoulder bursitis, arm and shoulder tendonitis, and carpal tunnel syndrome due to repetitive and forceful hand exertion while working with hand tools 	<ul style="list-style-type: none"> ▶ Use good quality and ergonomically designed tools whenever possible. ▶ Use a work platform to access ceilings and other hard-to-reach locations. ▶ Use proper lifting techniques: lift materials with your legs, do not bend over and lift with your back, and keep load close to your body. (See the chapter on Back Care in IHSA's <i>Construction Health and Safety Manual</i>.) ▶ To reduce stress on your back, arms, and wrists during drywall sanding, change your hand position, stretch frequently, and do not overreach. ▶ Warm up and stretch before starting work. Take a five-minute break during each hour of work. Stretch your back and neck.
<p>Framing walls and ceilings</p> <ul style="list-style-type: none"> ▶ Building partition walls and ceiling grid ▶ Installing wall and ceiling frames using power tools 	<ul style="list-style-type: none"> ▶ Overexertion injuries from lifting and carrying steel, aluminum materials, and a heavy bucket of nails and screws ▶ Injuries to the back and knees from prolonged bending at the waist (> 45° for more than 2 hours) and from squatting and kneeling when constructing wall frames from the floor ▶ Hand injuries due to repetitive use of power tools 	<ul style="list-style-type: none"> ▶ Actively assess the job and implement controls before starting work to avoid overexertion and awkward postures. ▶ Use proper scaffolding when installing ceiling grid. ▶ Minimize clutter around the work area to improve material handling and working at height. ▶ Lighten your load. Plan what you're going to do. Carry only the tools or equipment you will need. Wear a tool belt that fits properly and distribute the tools and materials evenly. ▶ Protect yourself. Avoid prolonged contact with hard surfaces and sharp edges. Wear kneepads, gloves, shoulder pads, or cushioned insoles in your shoes for comfort and protection. ▶ Practice good housekeeping. Pick up debris and scrap materials to prevent slips, trips, and falls. Bend exposed nails to prevent puncture wounds. Good housekeeping allows you and your equipment to get closer to your work.

A publication of the Acoustical and Drywall Labour-Management Health and Safety Committee
 in partnership with the Infrastructure Health & Safety Association

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