

# HOMEBUILDING: GENERAL LABOURERS

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. 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.
- 7. Minimize vibration exposure.** Vibration can be transmitted from work processes—such as operating hand-held power tools (hammer drills, chipping guns, jackhammers)—into workers' hands and arms. Frequent exposure to moderate and high-intensity hand-arm vibration can lead to permanent health problems.

Tasks	What can happen (Hazards/Risks)	Potential Controls
<b>Housekeeping</b> <ul style="list-style-type: none"> <li>▶ Sweeps and collects construction waste materials</li> <li>▶ Shovels waste materials into garbage bags</li> <li>▶ Picks up waste materials and disposes of it in garbage bins</li> </ul>	<ul style="list-style-type: none"> <li>▶ Overexertion injuries to the back and shoulders due to lifting and carrying               <ul style="list-style-type: none"> <li>• garbage bags ( more than 50 lb or 23 kg)</li> <li>• wood materials (planks, plywood)</li> </ul> </li> <li>▶ Repetitive bending when picking up materials</li> </ul>	<ul style="list-style-type: none"> <li>▶ Do not overload garbage bags with waste materials. Maintain a maximum weight of 50 lb or 23 kg when filling garbage bags.</li> <li>▶ Whenever possible, use shovels to pick up bricks and cut materials to reduce repetitive bending at the waist.</li> <li>▶ When picking up waste materials outdoors, use dollies, carts, or backhoes whenever possible.</li> <li>▶ Use powered wheelbarrows or carts to move materials.</li> <li>▶ Use assisted handles or gripping devices when handling wood planks, plywood and drywall sheets..</li> </ul>
<b>Constructs walkways</b> <ul style="list-style-type: none"> <li>▶ Shovels and rakes gravel to level walkways</li> <li>▶ Lifts and carries patio concrete slab (95 lb or 43 kg)</li> </ul>	<ul style="list-style-type: none"> <li>▶ Overexertion injuries to the back and shoulders while lifting and carrying patio concrete slab</li> </ul>	<ul style="list-style-type: none"> <li>▶ Use two-person lifting and carrying techniques when handling patio concrete slabs.</li> <li>▶ Use a handle suction cup to assist with lifting and carrying concrete slab, whenever possible.</li> </ul>
<b>Assists other trades with material handling</b> <ul style="list-style-type: none"> <li>▶ Assists with lifting and carrying homebuilding materials into homes (e.g., carpets, cabinets, flooring products)</li> </ul>	<ul style="list-style-type: none"> <li>▶ Overexertion injuries to the back and shoulders while lifting and carrying homebuilding products</li> </ul>	<ul style="list-style-type: none"> <li>▶ Use two-person lifting technique when handling material that weighs more than 50 lb (23 kg).</li> <li>▶ When possible, use carpet carts, dollies, hand carts, and powered wheelbarrows to handle large, heavy objects.</li> <li>▶ Use a ramp (made from aluminum or wood planks) to more easily handle objects on stairs and uneven walkways.</li> </ul>
<b>Repairs components that are damaged or incorrectly installed</b> <ul style="list-style-type: none"> <li>▶ Sands, drills, chips, and removes excess concrete</li> <li>▶ Sands sub-floor edges with hand-held sanding machine (44 lb or 20 kg)</li> <li>▶ Removes water from basement using water pump (23 lb or 10.5 kg)</li> </ul>	<ul style="list-style-type: none"> <li>▶ Back and knee injuries due to extended periods of squatting, kneeling and stooping while performing work with various hand tools (sanding machine, hammer drill, power spade, and water pump)</li> </ul>	<ul style="list-style-type: none"> <li>▶ Rent or purchase sanding machines that allow for an upright standing posture.</li> <li>▶ Use high-quality kneepads. (Kneepads distribute force over a larger area of the knee's surface, but don't reduce the forces on the knee joint itself.)</li> <li>▶ Use long-handled fastening tools to secure floor coverings when possible.</li> <li>▶ Use lighter hammer drills, breaker tools or spades whenever possible.</li> <li>▶ Consider renting or buying anti-vibration hand tools to reduce the risk of hand-arm vibration syndrome.</li> </ul>

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