

TOP 10 construction hazards

Ministry of Labour (MOL) inspectors have seen it all. Not much surprises them, except for the fact that the main hazards they see on construction sites have remained the same for years. “There’s been an improvement in how often we encounter these hazards, but the same things are still occurring,” says Michael Chappell, Provincial Co-ordinator for the MOL’s Construction Health and Safety Program.

When asked what needs to happen to improve health and safety on construction sites, Mr. Chappell highlights supervision.



Mike Chappell, MOL

Supervisors need to be more hands-on. My experience with supervisors is that they are technically very good at their job in terms of getting something built correctly and getting it done. When they rely on workers who are also highly skilled, they allow them to work with a low level of supervision. Obviously, this isn't producing the results for safety.

Mr. Chappell goes on to explain that “in a factory environment with 100 workers, you would see at least 10 supervisors walking around. In construction, you may have one or two.” One supervisor may be responsible for two or three smaller jobs and must split time between them. “Fundamentally,” he says, “the industry needs to think about how they supervise this work.”

With Mr. Chappell’s help, we have put together a top-10 list of the most common hazards MOL inspectors find on construction projects.

1

Scaffolding



The frequency and severity of injuries involving scaffolds show that this is one of the more serious safety issues in Ontario construction. Ensure that workers who work on or near scaffolding are aware of hazards such as falling debris, electrocution from powerlines, and falls. More importantly, take steps to control these hazards.

Set up a scaffold on level, compacted soil at a safe distance from overhead powerlines. A proper scaffold must have guardrails on all platforms, have platforms that are fully planked, and have all required components installed (base plates, mudsills, braces, coupling devices, etc.).

If there is a danger of falling debris, cordon off the area and put up Danger—Work Overhead signs. It’s also important to protect workers from falling while they are erecting or dismantling scaffolds, and whenever guardrails are removed temporarily.

Scaffolds must be inspected, maintained, and used according to the manufacturer’s instructions or the engineering and design requirements. A competent worker (i.e., a worker who is qualified because of knowledge, training, and experience to perform the work) must supervise the erection, alteration, and dismantling of a scaffold (O. Reg. 213/91, s. 130-131).

2

Falls

STOP FALLS!



Falls are the main cause of critical injuries and deaths for Ontario construction workers.* All workers who are exposed to fall hazards must be protected (O. Reg. 213/91, s. 26). The best protection is a guardrail system. If this is not practical, then a fall protection system must be used.

Workers who may use a fall protection system must take approved Working at Heights training followed by site-specific training at the workplace. Site-specific training involves identifying specific hazards and familiarizing employees with the fall protection equipment that they will use on the jobsite.

A competent worker must inspect fall arrest equipment for damage, wear, and obvious defects before each use. Ensure this inspection is carried out according to the manufacturer's instructions and meets the requirements of the CSA standard. If workers are required to use a fall arrest system, an employer must develop a written Fall Arrest Rescue Plan and post it on site. It is also good practice to have a written Fall Protection Work Plan.

3

Ladders



Many of the falls on construction sites are from ladders. Every ladder must be secured and safely positioned at the correct angle. Before a ladder is used, it must be inspected for damaged parts, including hinges, rungs or steps, side rails, and feet. Side rails should extend at least 900 mm (3 ft) above the landing and be secured at the top. Do not work from a ladder unless an assessment has been done to determine whether there are safer alternatives such as scaffolding or an elevating work platform.

Did You Know?

As of July 1, 2016, legislation requires that all portable ladders at a project meet the design, performance, test, and marking requirements of a Grade 1, Grade 1A, or Grade 1AA ladder in the CSA Standard Z11-12: Portable Ladders. (O. Reg. 213/91, s.80(1))

4

Exposure to occupational health hazards



Before July 1, 2016, the occupational exposure limits (OELs) under Regulation 833: Control of Exposure to Biological or Chemical Agents did not apply to construction projects (see page 12 for more information on this change to the regulations). Now that they do, the MOL has established a protection standard for reducing and eliminating respiratory hazards in the construction industry. It is important for workers, supervisors, and employers to understand these kinds of health hazards before they decide how to upgrade respiratory safety in the workplace. As a starting point for compliance, employers should do an assessment to determine exposure levels and the components of atmospheric hazards.

5

Lack of personal protective equipment



Employers are responsible for supplying their workers with the personal protective equipment (PPE) prescribed by law (OHSA, s.25(1)). Although many workers take their own PPE to a job, the employer is ultimately responsible for making sure that the proper PPE is used and is maintained in good condition. Head, eyes, ears, and hands must be adequately protected from falling or flying objects and sparks, dust, fragments of material, or anything else that can cause head injuries or burns. Where there's a risk of head injuries from side impacts, a Class E, Type 2 hard hat offers the best protection (for more information visit ihsa.ca and click on FAQs). Not wearing PPE is not an option—neither is wearing worn out, damaged, or inadequate PPE.

*Source: WSIB/EIW Snapshot Current to March 2016

6

Fire



Fire safety is crucial on any construction project. With wood being used for buildings up to six storeys tall, this becomes even more important. Fire extinguishers must always be visible, marked, and easily accessible. They must also be well-maintained, inspected regularly, and refilled or replaced immediately after use. Regulations require that every worker who may need to use fire extinguishing equipment be trained in its use (O. Reg., 213/91, s.52). The regulation also specifies the locations and circumstances where fire extinguishers must be provided.

Workers should be trained on the fire hazards present on the jobsite and what to do in an emergency. Fire emergency plans should specify what each person should do, provide evacuation routes, and be reviewed regularly. In the event of a fire, every worker should know immediately where the closest exit is and an alternative route if the primary exit is blocked.

7

Confined spaces



Workers in confined spaces must be aware of silent, invisible hazards. Fatalities are usually the result of oxygen-deficient, toxic, or combustible atmospheres. Confined spaces must be tested before workers enter them and must be continuously monitored with a properly configured and calibrated monitor. A trained rescue team must be available to rescue workers quickly. A delay of just five minutes can change a rescue operation to a recovery operation of workers who succumbed to the atmospheric hazard in the confined space.

8

Inadequate record keeping



Ontario's *Occupational Health and Safety Act* requires employers to provide training as prescribed and to maintain equipment, materials, and protective devices in good condition (OHS, s. 25-26). Without proper documentation such as maintenance, inspection, and training records, however, the employer cannot prove that every reasonable precaution was taken to keep workers safe. Keeping records can provide evidence of due diligence and can help the employer identify any hazards and remedy them before they can cause a problem. Records must also be kept that document a worker's injuries or medical treatment. As best practice, maintain a site log book. It tells the story of a project in case something goes wrong or there are questions about it later.



IHSA's *Supervisor Log Book* (RFO08) can be a helpful resource for keeping records

9

Welding



Welding is a common activity on construction projects, and welding injuries, from minor flash burns to eye injuries, are common as well. Unfortunately, many welders choose not to use PPE because they find it too uncomfortable or think the job is too small and doesn't require it.

These days, welders have many more options—in terms of lightweight, flame-retardant materials and safety accessories—to suit up for the job. Welding helmets should be equipped with the proper filter lens in either a passive or an auto-darkening style to shield against the arc's bright light. When flame cutting, eye protection such as safety glasses or goggles must always be worn.

10

Lack of training



A key to preventing many workplace injuries is frequent and effective training programs for employees. Recent changes to the Occupational Health and Safety Awareness and Training regulation under the OSHA have made it mandatory for both workers and supervisors to complete a basic training program (O. Reg. 297/13, s.1-2). In addition to the training required by law, there are programs for almost every construction safety topic. Download IHSA's *Training Requirements Chart* (W001) for more information.



However, it's not enough to just accept a training card as assurance that a worker has been properly trained. Employers and supervisors should routinely ask for a demonstration of health and safety skills to ensure that everyone on the project knows how to protect themselves and their co-workers.

If you are a construction supervisor, it's your responsibility to set the expectations for the jobsite—including health and safety requirements. If you're a worker, follow the rules and job procedures set out for you.

If you're an owner or senior manager, think about the changes you can make when it comes to how projects are supervised. From regular orientation and training to daily safety talks, make sure everyone has the knowledge and tools they need to work safely.

