

Power Tool Safety*



In the manufacturing sector, many serious injuries are the result of hand held power tools. The list includes portable circular saws, routers, hand grinders, reciprocating saws and jig saws. These tools are very versatile and as a result are frequently used in tight quarters, on ladders, and for shaping and sizing small pieces where the work piece is held by hand. Unfortunately, with the high cutter speed a slip or kick back can cause serious injuries to body parts.

Consequences of Laceration Type Injuries

Amputation of fingers or serious cuts to hands and other body parts cause irreparable nerve, muscle and tendon damage. These are life changing injuries to those that require dexterity and coordination in their work, or in their leisure activities such as playing musical instruments.

Mechanism of Injury

- Hand power tool kickbacks can occur because the blade or cutter is not sharp or damaged, forcing a tool to cut faster than its capacity, or using the wrong cutting tool for the task.
- Improper or insufficient guarding on rotating blades, cutter wheels, or grinding discs.
- Distraction of the person using the power tool causing them to take their eyes off the task.
- Placing body parts in the line of cut either in front of or behind can lead to injury when the worker slips, or the tool kicks back because of binding.
- Placing body parts under the intended line of cut, such as when hand holding a workpiece will lead to injuries.

- Electrical shock can occur when the worker is using frayed extension cords in wet conditions or when the operator cuts the power cord while operating the tool.

Associated Risks

- Training and supervision—ensure that workers receive the necessary training, mentoring and supervision to use hand power tools safely.
- Conduct workplace inspections to ensure unsafe conditions do not develop, including the workplace environment such as, floor conditions, lighting, height of working surfaces, spacing of workers, slipping and tripping hazards and that safe guards are in place on power tools.
- Cutting blades, bits, and discs inspected and maintained on regular basis—damaged or dull ones are removed or sharpened.
- Housekeeping must be kept at a high level to ensure that areas where hand power tools are used are kept clear of slipping and tripping hazards, if this is impractical ensure that workers are wearing footwear with enhanced traction for wet and slippery conditions.

Preventative Next Steps

- Use the right tool and blade, identify the right type of blades and cutters for your tasks.
- Ensure safe storage of blades and cutters to keep them sharp.

- Wear the appropriate personal protective equipment such as eye protection, safety boots, hearing protection required by hazards present.
- Support work pieces properly to minimize hand holding, stable pieces are less likely to cause kick back issues.

A worker should take the following steps to reduce the risk of injury.

- Inspect cutters, blades on a regular basis and remove any damaged cutters or blades from service immediately.
- Keep cutters and blades sharp at all times.
- Always keep your eyes and mind on the task, distractions lead to injury.
- If the power tool is slowing down, reduce feed rate to keep cutter at design speed.
- Never change blades or cutters on a power tool while it is energized.
- Always cut away from your body, keep body parts out from in front of, below and behind the line of cut.
- Use a clamp to secure small work pieces instead of your hand and fingers.
- Wear the personal protective equipment specified in safe work procedures.
- Use a sawhorse or workbench when possible to keep material at comfortable height.
- If distracted in your area while working with a hand power tool, stop work and address the interruption then continue when you can devote your full attention.



For additional resources visit:

[Work Safe BC](http://WorkSafeBC.com)

