



Safety Focus - Laceration Prevention in the Manufacturing Environment



Submitted in Partnership with

FutureComp[®]

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CBIA Workers' Comp Program Overview

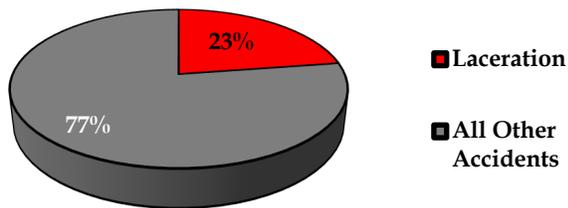


The Connecticut Business & Industry Association (CBIA) Workers' Comp Program consists of over 100 organizations with a collective goal to prevent accidents and incidents from occurring as a benefit to you the employer, the Program as a whole and most importantly, the employees whom are our most valued partners.

As Members or organizations are similar in nature of operations, safety related exposures could be common, thus we within the FutureComp Loss Control Department will attempt to send out periodic communications related to trending within the Program, more serious incidents that could have the potential of happening at your organization and hot topics in the industry, to include but not limited to any regulatory updates.

This focus is on lacerations, although not typically one of the costliest accident types, lacerations have actually been the most frequent. This could be somewhat expected in the fact that Members of the Program are indeed mostly machine shop type operations, thus employees are required to work with metal in various forms, around machinery with sharp tooling, and in general, with products that can have sharp edges and burrs. The other common challenge we hear from Members is that gloves can't be worn due to machine oils and other lubricants, before we dig deeper into some of the challenges, lets first take a look at some actual statistics;

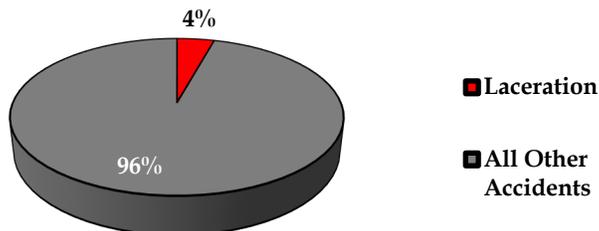
CBIA - Laceration Frequency - 2016 thru 2020



Looking at the last five completed calendar years, lacerations have been the most frequent accident type accounting for 23% of all reported workers' comp claims for the Program, almost one in every four incidents that happen to our Members are laceration related. We are seeing these trends continue into 2021 with 16 laceration incidents reported as of this focus.

Again, although lacerations are not one of the costliest accident types for the Program, only accounting for 4% of total incurred lost dollars in the past five years, we know that frequency has a tendency to breed severity. At the same time, lacerations have cost the Program over \$290,000 since January 1, 2016 and OSHA has a total estimated cost of a single laceration incident at just over \$40,000 when taking into consideration direct and indirect costs.

CBIA - Laceration Severity 2016 thru 2020



Common CBIA Lacerations & Potential Focuses

Grinding & Deburring



<https://radiac.com>



<https://weeklysafety.com>



<https://www.sme.org>

Control Considerations

- Ensure appropriate wheel guards are in place and adjusted based on wear of grinding wheels.
- Pedestal grinders should be secured to ground or workstation.
- Know pedestal grinder rules, 1/8-inch gap or less between tool rest and grinding wheel. 1/4-inch gap between tongue-guard and wheel, needing periodic adjustments based on wear.
- Guards should not be removed, if there is a certain operation that can't be done, alternative means to get the job done should be investigated.
- When feasible, consider the use of slides, fixtures, or other hand feeding tools to distance the operator from the point of operation.
- Utilize shields to separate operators from point of operation as much as possible.

Tooling & Material



<https://www.autodesk.com>



<https://www.metalwiresupplier.com/>



<https://www.machinemfg.com>

Control Considerations

- OSHA requires that a Personal Protection Equipment (PPE) Assessment be completed when a potential hazard exists and PPE could be used to reduce exposures. It is important to remember that specific requirements can be added to company operating procedures. If gloves can't be worn during all operations, consider if they can when the high hazard task or operation is being performed. For example;
 - When changing out tooling and fixtures
 - When loading raw materials, especially strip metal
 - When attempting to clear obstructions or swarf
 - When transporting scarp material or swarf for disposal/recycling

- When changing out tooling, and only when possible, cover sharp parts with a rag or some other means to protect against accidental contact. Ensure that appropriate wrenches and tools are used to open and close fixtures and wrenches themselves are in good working order. The majority of CBIA incidents involving tooling is when a wrench slips and hand/body part accidentally strikes adjacent tooling.
- Manufacture or use a tool (or jig) to clear scarp or processed materials, distance from the exposure reduces the potential.
- If excessive manual force is required to change out tooling, investigate if alternative means could be considered or if other problem factors are increasing issues (maintenance, torque, RPMs, lubrication...etc).

Cutting & Knives



<https://www.lowes.com/>



<https://www.metalwiresupplier.com/>



<https://www.jensentools.com/>

Control Considerations

- The most common uses of knives within CBIA is secondary type operations to include deburring and in shipping & receiving. The two most common types of knives used are Exacto and utility type knives.
- Ensure that the correct knife is being used for the task that needs to be performed.
- Provide readily accessible new blades and an appropriate method to dispose of used blades. The majority of laceration related incidents involving knives are typically due to an individual using excessive force and not allowing the blade to do the work for them.
- Provide and require that employees store their cutting tools/knives in a safe manner, for Exactos, stands can be made (even purchased) to allow for easy access, but protect against roll off. Many knives are sold with caps, but those are quickly discarded.
- For utility knives, if constant cutting isn't required, they make self-retracting models. These are not typically value adding when constant cutting is needed as it could increase ergonomic related risks.
- Always arrange work or processes so that employee is cutting away from themselves.
- When using sharp objects or tooling, gloves should always be investigated and considered.

SWARF (Scrap)



<https://www.offset.com/>



<https://www.2recycling.com/>



<https://www.alamy.com/>

Control Considerations

- The first thing we as safety partners are warned about when walking through most machine shops, scarp material or swarf can be sharper than some of the products....“like razor blades” we are often told. If not already done, all new employees should be informed of risks even including it as part of orientation.
- Whenever swarf is being managed, whether it’s being cleaned from cutting surfaces, dispensed from one container to another or being transported for removal/recycling, appropriate gloves should be worn at all times.
- Use a push stick or other device to clear working surfaces, again, distance reduces exposure.
- Develop routine housekeeping requirements that meet your production demands.
- Consider limiting amount of swarf being stored in 55-gallon drums (most common storage method in machine shops). Swarf will many times overflow the drums, not only creating an exposure when moving the barrels, but even for those just passing by. For instance, paint a fill line within the barrel and educate (enforce when necessary) that line should never be covered with material.

Gloves



<https://www.sliceproducts.com/>



<https://www.mcrcsafety.com/>



<https://www.smithandarrow.com.au/>

Control Considerations

- Things have changed from when there were only a few types of gloves to choose from to now where there are hundreds of types which can create difficulties selecting the right one(s). Glove manufacturers understand that gloves needed to be worn in varying environments, used in specific situations and ultimately meet the requirements of production while still offering some protection to the employees.
- The biggest challenge within CBIA is the fact that there are many sharp materials and objects within the operations, but with that also comes metal working fluids and machine oils, making it difficult to select the

right glove that will offer protection, but also not continuously breakdown or need replacing.

- Many glove manufacturers and or suppliers will offer samples to assist you in determining if a glove will be cost effective and offer protection to your employees. Even at times working with you as a potential customer to troubleshoot on potential best options. Consider investigating varying types of gloves and always make sure you get the feedback from the end users.... your employees.
- If it is impossible to implement a consistent glove protection program across your operations, you should conduct a PPE Assessment, determine when the hazards are most significant and consider developing a policy or standard operating procedure that hand protection should be used whenever that specific operation takes place. This only works if employees are supervised and held accountable when not following company policy.
- In addition to offering many different glove solutions, you can also purchase clips that would allow an operator or employee to always have their safety gloves with them to make it easier to comply with any newly developed policies. These clips could also be used in specific departments, areas, or tasks, attempt to provide a one size fits all solution at the point of exposure, for example the movement of scrap or swarf material.

IMPORTANT - Gloves of any kind should not be worn when an employee or operator could be exposed to rotating parts, such as Bridgeports, alternative protections should be considered.

Treat & Report All Lacerations No Matter the Severity



<https://www.stjohnvic.com.au/>

Control Considerations

- Some of the most expensive lacerations we have seen in the workers' compensation industry were actually related to minor lacerations that were not treated appropriately, got infected and resulted in more body parts being involved and in some cases amputations occurring when maybe they did not need to.
- Ensure that even the smallest cuts are treated appropriately, if there is ever a concern about severity and or potential for infection (due to environment) seek outside care from healthcare professional.
- Within CBIA, we have actually had lacerations turn into more serious events due to the environment, such as bacteria's in cutting oils, lubricants...etc. Again, reiterating the important of at least in house first aid even for the smallest laceration.
- We as your insurance partners recommend that any and all workplace incidents no matter the severity be reported. Just because it is a potential claim, does not always mean it is an OSHA recordable and minor claims from a cost prospective have minimal to no impact on end insurance costs. It helps protect you the employer, the CBIA Program, but most importantly the effected employee in case something does develop that is more serious.

▪ Laceration Conclusions

- Based simply on the nature and scope of operations within the CBIA Workers' Comp Program, it is unrealistic to think that lacerations will not occur as accidents can and will happen especially when considering that pretty much everything your employees work with has the potential to cause a laceration.
- In risk management, it is all about identifying potentially hazardous conditions and making every feasible effort to reduce the potential of an incident from happening in the first place. By providing you with some general information on specific trending within your industry, we hope at least awareness can be increased with the hopes that laceration incidents will become less frequent, but also discuss some progressive ideas other Members have implemented into their operation.
- Frequency has a tendency to breed severity, although laceration injuries have not historically been the costliest accident types, we want to still focus on reducing, controlling or eliminating exposures to help prevent the future costly one.

Important: This Safety Focus is to act as a guide in not only informing you of some of the most common and costly potential workers' compensation exposures within CBIA, but also provide some common approaches and control methods to address these exposures. It may be necessary to have more detailed and specific analysis to address your specific needs, in these situations please contact your CBIA safety partners at the FutureComp Loss Control Department.