

Woodworking Accidents and First Aid Kits

by
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Because woodworking is inherently dangerous, every woodworking shop should have a first aid kit and every woodworker should know how to respond to shop accidents and be able to provide first aid to those injured, including themselves.

While many people believe that accidents in woodshops happen instantaneously or by themselves and are mostly caused by not paying attention to what a woodworker is doing. However, every accident actually have a timeline leading up to the actual injury(ies). This timeline could be environmental, mechanical, individual, or a combination of these situations. Following are scenarios are actual examples for each of these factors:

Environmental

A member of a club woodshop was getting ready to move a sheet of plywood. The shop doors are open wide to let cool air in. Suddenly there is a gust of wind that blows through the shop. The wind catches the plywood the member was carrying and blew him off balance, losing his grip on the plywood. The plywood knocks into another woodworker who was using a tablesaw. That woodworker was also thrown off balance, pushing one of his arms forward into the spinning saw blade.

Mechanical

A woodworker was using a drill press, holding onto a piece of wood that is being drilled. Suddenly the drill bit caught a knot in the wood, twisting it out of his hand, spinning it around to catch his fingers and cutting them.

Individual

A carver was carving a piece of wood when the carving knife hit a particularly soft area in the wood, rapidly cutting through it and ends up in the middle of his thumb.

A wood turner was turning a spindle on a piece of wood. Although the tool rest was set at the proper distance when he began turning, he did not adjust it as wood was made round and he started cutting a cove. Suddenly the gouge flew out of his hand, driving his

forward guide thumb into the space between the tool rest and wood, crushing and breaking the thumb.

Combination

The woodshop is located in an old building with a leaky roof. To contain the leaks, buckets are put out to catch the rainwater (environmental). Someone accidentally kick over a bucket half filled with water that soaked into the blue jeans of another woodworker and the concrete floor (environmental and individual). The other woodworker turned on an ancient bandsaw that did not have a UL switch (mechanical).

When he flipped the switch, he got shocked. With muscles suddenly contracting, he was thrown off-balance and as he fell cracking his head on the edge of a joiner.

Although the above examples are extreme, they demonstrate that accidents actually have a timeline. Often times the timelines are not as easily discernible as those above. For example, many people don't get enough sleep or may even have sleep apnea. When this condition is brought into a woodshop, accidents can develop due to inattentiveness. Similarly, if a person yawns, sneezes, talks to others, etc. attention cannot be fully given to the action the woodworker wants to complete.

Most commercial, school, or organizational woodworking shops have safety rules in place in the attempt to reduce the chances of injuries. Many of these rules are common sense and many often come from tool manufacturers. Regardless, every group needs to discuss shop safety on a regular basis. Discussion needs to also include the environmental, mechanical, and individual factors that can lead up to an accident and possible injury.

Every newsletter or communication with students, employees, and members needs one to five safety highlights.

When an accident does happen, everyone in a woodshop needs to know how to react properly to any injury that occurs. While having someone in the shop all the time it is open who is certified in first aid is desirable, it is not practical. Thus students, employees and members need first aid training.

Over the years different organizations have developed steps to take for administering first aid. The old standby of ABC – airway, breathing, and CPR is a good set of steps to follow. However the best approach is to follow the **DRSABCD** acronym. This Australian term stands for:

- **D**anger – always check the danger to you, any bystanders and then the injured or ill person. Make sure you do not put yourself in danger when going to the assistance of another person.
- **R**esponse – is the person conscious? Do they respond when you talk to them, touch their hands or squeeze their shoulder?
- **S**end for help – call 911. Don't forget to answer the questions asked by the operator.
- **A**irway – Is the person's airway clear? Is the person breathing?

If the person is responding, they are conscious and their airway is clear, assess how you can help them with any injury.

If the person is not responding and they are unconscious, you need to check their

airway by opening their mouth and having a look inside. If their mouth is clear, tilt their head gently back (by lifting their chin) and check for breathing. If the mouth is not clear, place the person on their side, open their mouth and clear the contents, then tilt the head back and check for breathing.

- **B**reathing – check for breathing by looking for chest movements (up and down). Listen by putting your ear near to their mouth and nose. Feel for breathing by putting your hand on the lower part of their chest. If the person is unconscious but breathing, turn them onto their side, carefully ensuring that you keep their head, neck and spine in alignment. Monitor their breathing until you hand over to the ambulance officers.
- **C**PR (cardiopulmonary resuscitation) – if an adult is unconscious and not breathing, make sure they are flat on their back and then place the heel of one hand in the centre of their chest and your other hand on top. Press down firmly and smoothly (compressing to one third of their chest depth) 30 times. Give two breaths. To get the breath in, tilt their head back gently by lifting their chin. Pinch their nostrils closed, place your open mouth firmly over their open mouth and blow firmly into their mouth. Keep going with the 30 compressions and two breaths at the speed of approximately five repeats in two minutes until you hand over to the ambulance or another trained person, or until the person you are resuscitating responds.
- **D**efibrillator – For unconscious adults, who are not breathing, apply an automated external defibrillator (AED) if one is available. An AED is a machine that delivers an electrical shock to cancel any irregular heart beat (arrhythmia), in an effort get the normal heart beating to re-establish itself. The devices are very simple to operate. Just follow the instructions and pictures on the machine, and on the package of the pads, as well as the voice prompts. If the person responds to defibrillation, turn them onto their side and tilt their head to maintain their airway. Some AEDs may not be suitable for children.

Every woodworking shop needs a first-aid kit. This is especially important for any shop where two or more woodworkers may be present (includes clubs, organizations and employers). In addition to having a first-aid kit, each shop should also have the means of contacting 911 by either phone or radio.

A woodworkers' first-aid kit is very different from those kits sold in drugstores and elsewhere. It contains materials for closing cuts, flexible coverings for wounds, tools for removing splinters, and eye wash. These products are available from multiple sources.

If your shop has elderly woodworkers, you need to have an AED as part of your first-aid kit. DO NOT skimp on quality. Also establish a monthly and/or as used maintenance program for your first-aid kit. There is nothing worse than not having an item in the kit that may save a life.

A Woodworking First Aid Kit

AED

Antibiotic Ointment - Neosporin, Bacitracin, or other

Bandages - Band-Aids

Bandages - Israeli pressure (4" and 6")

Bandages - Tegaderm

Bandages -Hyfin Vent chest seal

Bandages -triangular

Blanket – emergency, space blanket

Cold packs

Disinfectant

Disposable Gloves

Eye wash – delivery system

Eyewash - solution (three 16-oz bottles)

First aid box

Forceps

Gauze – 2"x2" and 4"x4" pads

Gauze – rolled

Gauze – Celox Rapid haemostatic (3"x5')

Ice packs – instant type (Dynarex)

Magnetic flashlight

Magnifying glass (5x)

Safety pins

Scissors - trauma Stainless steel

Severed finger transport pack (ziplock bags, gauze)

Sterile Needle(for removing splinters)

Super glue

Tape – Coban, elastic

Tape – medical, adhesive

Tape - Steri-Strips

Tourniquet – CAT-7 Tourniquet, tourniquet holder, and red marker

Tweezers - Stainless steel

X-Acto knife

Minor cuts and abrasions

Barring a serious laceration or amputation, you have to clean any bleeding injury with soap and water. Inspect your wound for foreign objects – bits of wood, grit, metal. Remove them by flushing with water. For deeply imbedded grit, you may need to use a scrub brush. Apply an antibiotic ointment to the wound. If bleeding persists, apply pressure to the affected site with a clean gauze pad. Cover the wound with a sterile bandage when the bleeding stops.

Check the wound periodically for renewed bleeding, signs of infection, increased pain, swelling or redness. Minor swelling and redness is normal in the first day or two. Watch for red streaks going up your arm or leg or pus drainage. If these occur, have the injury evaluated by a doctor.

For serious injuries: Don't panic

Most woodworking injuries happen to the hands. The natural reaction when you've hurt your hand is to cover it with your other hand, put pressure on the wound and hold both hands to your stomach. Sit down and take a few deep breaths. Sitting down tends to make you relax, as will the deep breaths, and if looking at the injury is going to cause you to feel light-headed; you're less likely to fall down from a seated position. Now, take a look at what has happened.

Lacerations — In addition to the above guidelines, you should assess whether a laceration needs to be seen by a doctor or go to the emergency room.

- If the cut is spurting blood, there is likely to be an injury to an artery. To control bleeding, apply pressure with a clean gauze pad. Apply an ice pack to reduce bleeding and pain.
- If the laceration is gaping and deeper — the edges do not come together — or if it is on your face, where scarring is less acceptable, you may need stitches.
- If you see muscle (it looks like steak), fat or tendons in the wound or if there is a flap of flesh.
- If the area beyond the laceration is numb, you may have nerve damage.
- If you cannot bend the adjacent joints, a tendon may have been injured.
- If the wound continues to spurt blood or the arm, leg or finger is cold compared to the others, you may have injured the artery feeding that part.

Fractures — The most likely fracture for woodworkers is a finger fracture, usually the result of a hammer blow or from a nail gun.

Shooting a nail through bone is serious because this type of fracture has a high likelihood of infection. When a nail hits bone there will be extreme pain, swelling and bruising. Another sign of a fracture is not being able to move the joint next to the injury. If you have any of these signs, see a doctor.

If you whack your finger with a hammer, put some ice on it. Most thumb-whacking injuries cause bruising under the fingernail. If the bruising causes such pain that you are unable to go about your business, have it checked by a doctor.

Amputations —The first step in any complete or partial amputation is to control bleeding with a pressure dressing. Wrap something clean around the wound, and hold on. Blood loss is a major factor. Elevating the injury above your heart and applying an ice pack will help control bleeding. Go directly to the hospital. If you can find the amputated part, wash it off, place it in a plastic bag and put the bag on ice. The doctors may not be able to reattach it, but the odds go way up if the part is at the hospital.

If you cut off more than a finger, immediately apply pressure to the stump to control bleeding. Don't panic; keeping cool can save your life. Call for help. If you can, unlock the front door to save time for the paramedics. Sit near the door, or if you feel light-headed, lie on the floor. Don't worry about the cut-off part; the paramedics will find it.

Eye injuries

The most common eye injuries are from foreign objects and chemicals. If you get something in your eye, don't poke at it. Closely inspect the eye in a mirror or have someone do it for you. If the material is imbedded in the eye, go to the hospital. If the material appears to be floating on the surface of the eyeball, the best thing is to flush it out with eye wash or plain tap water. Hold your eye open so that the water can actually wash out the material. If the material is still in there, have a doctor examine your eye.

Chemical splashes from finishes or strippers can be very damaging to the eye. If a splash occurs, immediately flush the eye under running water for 5 to 10 minutes. If the eye is still painful or if an alkaline substance like lye, caustic strippers or cement was splashed in the eye, you must be evaluated by a physician. As a general rule, if the eye hurts so much that you can't open it, go to a doctor at once.

Fumes and dust

Breathing various fumes or dusts can cause illness. If you are working with a finish or solvent and feel dizzy or sleepy, leave the area at once, opening a window or door to the outside as you go.

Many exotic woods cause allergic reactions. Repeated exposure to the oils in these woods can cause rashes, but it is possible for the allergy to first manifest itself by breathing problems such as acute asthma or wheezing. The fine dust or the smoke from machining these woods can trigger an attack. If you find that you are having trouble breathing while working with these woods, stop what you are doing, and leave the area. If you don't improve or you are struggling to breathe, seek medical attention.

Woodworkers are also at risk for chemical burns from strippers containing lye, ammonia, or bleaching agents such as oxalic acid. If you come into contact with these materials, immediately flush the affected part with water for at least 5 minutes. If the area blisters, especially if it involves the face or hands, see a doctor.