

## Toolbox Safety Topic

### Chain Saw Safety

Could this have been you? A woman was helping her husband clear some small trees from their property when she tripped on some brush. When she fell, her neck touched the chainsaw her husband was operating, cutting an artery. She died from massive blood loss. The victims of chainsaw-related injuries are usually the operators, but obviously can also be a coworker, friends or family members.

Chain saws can be great labor saving tools, but if not operated properly and with respect, they can quickly cause severe injury and death. In 1999 alone, there were more than 28,000 chainsaw-related injuries. Over two-thirds of the injuries occurred to the hands and legs and the average chainsaw injury requires 110 stitches! We will cover a few of the basics in chain saw safety below, but it cannot be stressed enough that the operator's manual be consulted for model-specific safety information. **READ THE OPERATOR'S MANUAL!**

1. First, ask yourself if you need to use a chain saw. If you have only small branches (4 inches or less), you should use a handsaw or axe. Chain saws are not suited for cutting such small branches.
2. If you haven't already read the operator's manual, then **READ THE OPERATOR'S MANUAL!** This resource will give you specific information on checking and adjusting the chain tension, which is very important for safe operation, in addition to proper maintenance and operation for your particular model. Before each use, check:
  - ✓ The general condition of the saw (no leaks or damage).
  - ✓ The throttle, safety throttle lock, and stop switch (all operate correctly).
  - ✓ The chain brake (works).
  - ✓ The chain (lubricated, sharp, and tensioned correctly).
  - ✓ The sprocket and bar (good condition).
  - ✓ The idle (properly adjusted).
3. Make sure you are wearing the appropriate protective equipment when operating a chain-saw. This includes:
  - ✓ Safety glasses or goggles for flying debris and impact from kickback. Secondary protection, such as face shields, is also recommended.
  - ✓ Heavy-duty non-slip gloves for cuts, abrasions, weather and vibration. Raynaud's Disease or White Finger can result from extended exposure to vibration and reduced blood circulation. Maintain a firm grip, but avoid gripping the saw with excessive force, which can reduce blood circulation in addition to cold weather.
  - ✓ Sturdy non-slip boots to prevent slipping and falling while operating the chainsaw. Soles should have a deep tread, the boot should extend past the ankle, and steel-toes are recommended.
  - ✓ Hearing protection, such as ear plugs or ear muffs are required during operation. (The higher the Noise Reduction Rating – NRR - the better.)
  - ✓ Trim-fitting clothing to avoid snagging and entanglement.
  - ✓ Long-sleeve shirt and pants to protect arms and legs from flying debris and abrasions.
  - ✓ Leather chaps made of Kevlar or ballistic nylon should always be worn, if available, since the legs are very vulnerable and excessive blood loss from injury to this area can become critical in a matter of minutes. Look for equipment that meets American Pulpwood Association guidelines.
  - ✓ Hard hats are required for tree felling, preferably high-visibility colors. They will also protect the head from kickback situations.

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### Transporting the Saw:

- ✓ Put the chain guard on the saw when not in use.
- ✓ Always carry the saw at your side with the cutting bar and chain to the rear and to the outside.
- ✓ Never carry a chain saw in the passenger area of a vehicle.

### Fueling the Saw:

- ✓ Use the fuel mix recommended by the manufacturer.
- ✓ Never fuel a hot chainsaw; let it cool first.
- ✓ Always fuel in a clear area away from debris.
- ✓ If your fuel can has no spout, use a funnel.
- ✓ Wipe the saw clean of any spilled fuel after fueling.
- ✓ Never smoke while fueling.

### Starting the Saw:

- ✓ The safest way to start the saw is to move 10 feet or more away from the fueling area, place the saw in a clear, debris-free area, and hold the saw firmly on the ground by putting your foot through the rear handle (if possible) and hold it down with one hand on the top handle.
- ✓ Pull the starter cord with the other hand.
- ✓ The chain should not be moving while the saw is idling.
- ✓ Never start the saw while holding it off the ground, or by “drop starting” it.

### Cutting:

- ✓ Clear away anything that has a chance of interfering with the operation.
- ✓ Remove debris that could cause you to slip or lose your balance or accidentally contact the chain.
- ✓ Keep both hands firmly on the saw when cutting.
- ✓ Kickback occurs when the saw rotates back, or “kicks back” at the operator due to the nose of the saw contacting an object or obstruction. To prevent kickback:
  - Use a saw equipped with a chain brake or kick back guard.
  - Hold the saw firmly with both hands. Grip top handle by putting the thumb around it.
  - Watch for twigs that can snag the chain.
  - Don't pinch the chain while cutting the log.
  - Saw with the lower part of the bar close to the bumper, not on the top near the nose.
  - Maintain high saw speed when entering or leaving a cut.
  - Keep the chain sharp.
  - Do not reach above your shoulder to cut. The chain is too close to your face in this position.

Also, remember that many injuries occur because the operator got too tired or withstood long periods of saw vibration. Take frequent breaks and make sure you are in top physical and mental condition when operating chainsaws and other dangerous machinery. It is also recommended that you have a first aid kit nearby when operating a chainsaw and that you use the buddy system.

Forrester Carl Smith described the chainsaw as “the most dangerous hand tool that can be purchased on the open market”. Every year over 40,000 people are injured while operating chainsaws in the U.S. Don't be one of them!