

# CHAIN SAW USE: Plan and Position to Cut Safely Using Both Hands



The author with two hands on a top-handle saw. Note that the thumbs and fingers are fully encircling each handle. All photos, unless otherwise noted, courtesy of the author.

By Ken Palmer

Today's chain saws are designed, engineered and built to be handled with both hands, using very specific cutting methods. Tree climbing and rigging methods, bucket trucks, cranes and many types of lifting equipment all can be used to position someone, somewhere, to cut something. Professional tree workers frequently use chain saws, and in many different positions. As we all know, working with chain saws can be dangerous.

falls from elevation, and electric shock. Fatal accidents have occurred from workers being struck by falling trees and limbs; workers struck by motorized equipment; workers falling from trees, lifts, and ladders; workers caught in chippers; and electrocution while working near overhead power lines.

We have less conclusive data about injuries. However, we do know that a very large percentage of all injuries and fatalities are a result of someone cutting something, somewhere. Whether falling from the tree they were climbing by cutting themselves out, being struck by part of a tree because of a cut by a tree worker above, poor rigging practices causing the climber in the tree, an aerial worker in a bucket, a crane climber or ground worker to be struck by the tree or parts of the tree. Then, of course, are the all too many cut-by-the-saw type accidents. It is not a pretty picture!

We have better personal protective equipment, better cutting tools and techniques, and better, safer equipment today than ever before. Why then does data show that there are more injuries and fatalities than ever before? The data clearly points to the fact that, all too often, best safe-work practices, and knowledge and skill with



This closeup shows the thumbs and fingers fully encircling each handle.

cutting tools is lacking.

Statistical data shows that the left hand is the number one part of the body most frequently cut by a chain saw. But statistical data and/or facts alone can neither illustrate nor demonstrate the full truth of the matter. Because good data can be used to quantify and measure specific aspects of human performance, good or bad, we tend to rely on data to help us understand cer-

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In 2012, 243 workers nationwide died while engaging in tree trimming and clearing activities. The four leading causes of tree trimming and clearing fatalities are: struck-by incidents, caught-in incidents,

tain aspects of human performance. This is particularly apt when the data shows poor and unsafe operating practices causing pain, suffering, fatalities, and lost work days, costing big money and even the stability and integrity of an industry.

We all come to work in the tree care industry with different educational backgrounds, and different training and experience regarding our use of cutting tools. Urban legends, myths and stories that dazzle the imagination a bit like magic often influence our operating habits. Whenever and wherever cutting tools are used, one thing always holds true: if knowledge, skill and experience are lacking, critical thinking, decision making and operational behaviors hang in a very risky balance.

All too often workers are put in a position to just figure out a way of “gettin’ ’er dun,” and how to get things done on time, or even ahead of time. Ultimately, however, this can lead to unsafe work practices and bad habits. Paying the price and learning hard lessons about cutting tools can be more than just a real bummer! Lack of education and training, old mind sets around “acceptable risks,” and cultural norms are taking a very heavy toll on the lives (and deaths) of far too many tree workers and their families!

Sustainable safe work methods, skills and productivity are directly connected! Planning and preparing ahead to connect professional cutting tools and technologies with professional cutting methods and techniques will exponentially increase safety, skill and overall productivity!

It has been said that, “we have an epidemic on our hands.” For several decades, at least, and in particular since the introduction of the top-handle chain saw, a culture of “cutting and chucking” parts of tree limbs, branches and other parts of trees, by cutting with one hand while holding with the other, has gotten quite a foot hold, and all too often has become common practice. It is true that the top-handle chain saw does position both hands over the center of mass, making the practice of cutting with one hand on the saw possible. This places that potential always in front of the operator, and top-handle chain saw



*Two hands on the saw, as well as using proper PPE such as chaps, can help reduce the chances of suffering an injury such as this one. Photo courtesy of Chuck Holton@flickr.com*

operators often fall prey to the temptation of one-handing. There is a very common saying: “it’s fun and games” or “it’s all good” – until someone gets hurt or killed!

The reason chain-saw manufacturers have engineered and positioned both handles of the top-handle chain saw over the center of mass is to position both hands over the center of mass. This provides more ergonomic chain-saw handling when the operator is unable to keep the power head close to the body. This minimizes negative forces on the lower back and skeletal structure of our bodies, which is beneficial to a tree worker in a bucket truck, for example, or a climber in a tree. The shorter profile is also helpful for working in the confined space of a tree.

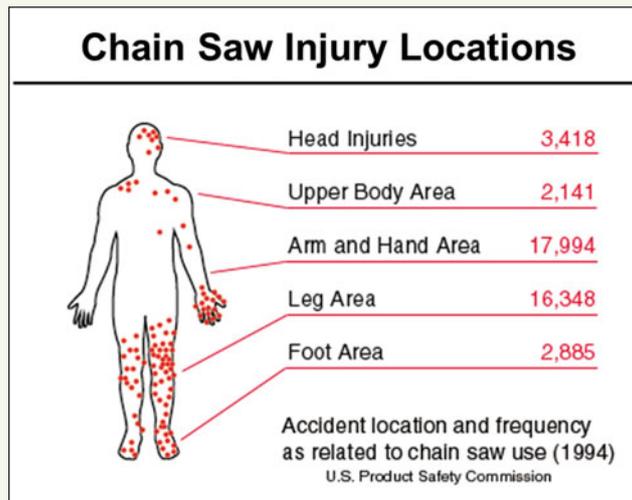
Chain saw manufacturers are measured

for the safety of their equipment and, to some degree, the safety of its operators. No chain saw manufacturer wants to encourage operators to run their chain saws with one hand because they know how potentially dangerous that practice is. The fact is that you simply cannot cut your hand if it is on the saw!

Some chain saw salespeople add to the problem. They may not understand just how potentially dangerous that practice is when they demonstrate how easy it is to use a saw with one hand. Remember, they are measured by and paid for how much they sell, not how much they know about safety, skill and productivity. That is our job!

Recently Peter Gerstenberger, TCIA’s senior advisor for safety, compliance & standards, started a discussion on the CTSP blog about the epidemic of one-hand use of a chain saw. Doing so started some truthful sharing, honest postings and thoughtful discussion. I believe that those are some of the best things we can do at this point! I really do not want to point fingers, assign blame or behave in a legalistic way in this important matter.

Let’s be honest though. We all know that running a chain saw with one hand is risky business! Yet no one wants to be told, “never ever” or “just don’t do it,” when it’s been a method that has stood in the gap of a lack of training. We need to rid our-



*Graphic courtesy of the U.S. Product Safety Commission.*

selves of old mindsets around “acceptable risk,” cultural norms and just not knowing a “better way” to get a job done. Just saying, “never ever” or “just don’t do it” may not always be realistic and does not get to



*It is hard to imagine how such an injury as this could happen if both hands were gripping the saw handle. Photo by Dan Bird @flickr.com*

the heart of the matter, when learning and applying better methods is what is needed.

Often, taking time to do some rigging can not only save the risk of one-handing, it can actually make the job go more efficiently overall. Rigging can also save the

risk of ground workers ducking and dodging falling limbs, furthering the safety, skill and productivity of ground workers. Starting cuts with a chain saw and finishing with a hand saw can also solve a lot of risky one-hand cutting issues. Learning new cutting skills can also take a big bite out of this risky business.

Why not learn and use new or just plain different cutting methods? For example, progressively and systematically reduce one-handed chain-saw cutting by learning and applying safer alternative methods that may be more productive overall. Over a period of time, a person could dramatically reduce or eliminate one-handed cutting all together. Let’s move to a better place in an honest and realistic way.

I will be presenting/hosting a seminar and discussion on the problem of one-handed chain-saw operation and alternative work methods at TCI EXPO in Hartford, Connecticut, this November. I call on, invite and encourage all stake holders, including known industry experts, commercial residential tree workers, utility line clearance



*An accident waiting to happen. Photo by Michael Hanscom@flickr.com.*

tree workers, government/municipal tree workers and everyone who considers themselves an arborist, to get involved in this discussion. Let’s talk openly and communicate about this problem. If we don’t, injuries and fatalities will continue to increase, the cost of doing business will continue to increase, and the integrity of our industry will continue to decrease! We need to provide helpful, realistic thinking and alternative work methods to the people with their hands on the chain saws! This really is about critical thinking, decision making and a true commitment to the integrity of our industry. Let’s tackle this thing together!

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