

Caution: Arc Welding, Chemicals, and Parkinsonism

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This open editorial is not about arc welding, chemicals, or Parkinsonism. Rather, this first-hand information is intended to serve as a cautionary tale to my friends in agriculture. **Please take the time to follow appropriate safety protocols when welding and applying chemicals.** Failure to do so may lead to **living with Parkinsonism**, a situation I am all too familiar with. The term “Parkinsonism” describes conditions that affect core motor skills like slowed movement (bradykinesia), muscle stiffness (rigidity), resting tremors, gait and balance issues. It also affects non-motor skills like cognitive thinking, sleeping disorders, gastrointestinal and sensory defects. I do not wish this type of disease upon anyone.

Arc welding, particularly flux-cored arc welding, creates heavy particulate fumes containing manganese. Breathing these fumes over time leads to a buildup of manganese in the brain. According to scientific community research studies, long-term exposure to these metal fumes is one contributing factor to Parkinsonism. There are other causes of Parkinsonism including chemical exposure to herbicides and pesticides, environmental factors, genetic inheritance, age and others.

My Dad taught my brother Allen and I how to “stick weld” at an early age. Allen was later diagnosed with Parkinson’s Disease as well. We both took welding in High school shop class and didn’t give much thought to the potential hazards we were being exposed to. Perhaps genetics, inhaling fumes from welding over time, or both were contributing factors to us both being seriously impacted later in life. Safety protocols when welding or applying herbicides/pesticides are intended to mitigate the risks that come from long term exposure.

It is recommended to properly clean repurposed metal prior to welding, weld and work in well-ventilated open areas, add exhaust / ventilation fans to one’s shop, wear respirators when required, maintain helmet lenses, wear appropriate clothing including leathers. It is important to stay current on advancements in equipment and technology as they might require taking additional precautions. Unfortunately, I frequently circumvented many of these safety protocols.

Throughout the years I seldom utilized new clean metal. Instead, I searched the bone yard for scraps. These discarded scraps included old lead based painted metal, galvanized pipe, or rusted metal from discarded automobiles, haying equipment and abandoned past projects. As many ranchers do, I re-purposed and transformed scrap metal into new projects.

As I aged, I equipped my shop with arc welders and many other neat tools. My shop improvements did not include an exhaust or ventilation system. In the interest of time, I often

skipped or short cut safety protocols. As an example, to compensate for declining eyesight I simply held my head and helmet closer to my welding arc instead of upgrading my helmet to include a magnified Lense. This caused me to breathe in more of the toxic fumes. I welded in closed-in areas without proper ventilation, wore no respirator when I should have. I seldom properly cleaned contaminated metal. Basically, I ignored or downplayed many of the industry safety standards for welding. Frankly, I was reckless.

Over the years, I fabricated some fantastic metal projects and had fun doing them. I am convinced that I am paying the price now for ignoring safety protocols then. I felt I was “bullet proof” and thought “it will not happen to me”. In addition to welding, I often handled and applied agriculture chemicals, another identified cause of Parkinson’s disease. I dismissed the risk here the same as with welding.

Does my story sound familiar to you? Welding and chemical application are essential to agriculture. So is following appropriate safety protocols for each. It is so easy to get lost in the moment of a project whether it is out of artistic fervor for creating something neat out of metal, or whether it is out of necessity that a project just needs to get done. I plead with you, for your own sake, to pause for just a moment and take some precautions reducing the probability that you may suffer later from a disease that will be with you for the rest of your life. Parkinsonism is a slow, lifelong degenerative brain disorder that, among other things, affects cognitive thinking, movement, gait and balance. Please heed this advice, your future quality of life may depend on it.

Similar to contracting lung cancer from smoking cigarettes, one cigarette does not cause cancer. However, a lifetime of smoking cigarettes increases that probability. If you are not currently following welding and chemical application safety- protocols, consider it helpful advice from an old friend who has Parkinsonism disease. I have no one to blame but myself.

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