

CASE STUDY

The First Shock Nearly Killed Him, the Next Two Helped Save His Life



Utility Employees Revive Man Shocked with 7,200 Volts

"He's hit!" yelled the lead line technician. "I looked at him and said this guy's dead," muttered another, shaking his head in stunned disbelief.

A massive 7,200 volt shock of electricity had just surged through Lee Younts' left index finger, through his heart, and out through his right hand, as he was demonstrating some new electrical equipment for technicians at the Northern Virginia Electric Cooperative (NOVEC) facility in Gainesville. It stopped the heart of the 34-year-old from Richmond, Virginia. "He took a few steps toward me and collapsed at my feet," said Roger West, safety specialist for NOVEC's risk management department. "We rolled him over on his back and the air just went out of him. I yelled to open his airway!"

Fortunately for Younts, these utility workers knew what to do and sprang into action, aware that every second counted to save Younts' life.

West, in fact, is the one who makes sure all 300 NOVEC employees know how to perform cardiopulmonary resuscitation (CPR) and use an automated external defibrillator (AED). The former army drill sergeant and volunteer fire department chief took charge and started giving commands. Apprentice

linemen were ordered to ground and unplug the "hot" equipment as another called 911. Line technician Dustin Dell, also a volunteer firefighter experienced in CPR, checked Younts for a pulse. Finding none, he opened Younts' shirt and started CPR, while apprentice linemen Chris Bastien and Jesse Taylor ran and retrieved the ZOLL AED Plus®. The pair knew what to do. As apprentices, they had placed second and third in the 2010 Gaff-n-Go Lineman's Rodeo CPR with AED competition, which actually uses the AED Plus to test contestants. Dell quickly shaved Younts' chest¹ before Bastien applied the electrodes. The lineman gave the first shock when instructed by the AED Plus, then immediately started CPR. Help was given during CPR when the AED Plus prompted "Push Harder" during chest compressions. After CPR and the second heart analysis, the AED Plus again advised a shock. After the second shock and five minutes of CPR, Younts finally regained consciousness.

"We had training so we knew what actions had to be taken, and once we turned on the AED Plus, it gave us instructions on what to do. We weren't worried about injuring him because in essence he was already dead," Taylor replied when asked how his team was able to respond so quickly.

"The initial shock scared the daylight out of me. It's nothing like you see on TV. He jumped about two inches in response to the initial shock. I jumped about two feet!" said Bastien.

For West, also a veteran of dozens of rescues as a volunteer fire chief, this was a jolting experience. "It was unnerving because I was an eyewitness. I never had someone go down in front of me before," he said.

Ambulance medics arrived within five minutes and called for the medevac helicopter that transported Younts to a Washington, D.C., hospital burn center. There, doctors used therapeutic hypothermia to cool his body down to 33 degrees Celsius to place him in a medically induced coma. Younts responded so well to treatment that he was discharged from the hospital three days later.

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*Jesse Taylor
Apprentice Lineman, NOVEC*

A month later, Younts beamed as he went back to work at NOVEC's Gainesville facility. This time he was able to thank and honor the quick, skilled action of his heroes. "I will always have a special place in my heart for these guys," he said.

¹ A Rescue Kit is included with the CPR-D Padz[®] that come with the AED Plus. Rescue accessories include a razor, wet and dry wipes, scissors, a face shield, and gloves. Electrodes need good contact with skin and cannot perform their job if there is a significant amount of chest hair, which is why shaving is recommended.



Medics transport Lee Younts to a waiting medevac helicopter after he was resuscitated with CPR and an AED Plus.

According to West, NOVEC has been teaching CPR to all employees for 38 years. He said it's going on five years that NOVEC has had its AED program in place. He selected the AED Plus because he says it's the "Cadillac" of AEDs and offers the best support in a rescue. In all, NOVEC has 48 AEDs. AED Plus units are in all NOVEC offices and many utility trucks. Each lead lineman has an AED Plus assigned to him, not only because they are employed at an electric utility, but because they serve 145,000 customers in six counties outside of Washington, D.C., many in remote areas that can't quickly or easily be accessed by emergency services.

It was during Younts' rescue that the AED Plus was used by NOVEC for the first time. It was the AED Plus and the utility employees' annual training in CPR and AEDs, along with their courage, that helped save Younts' life.

The AED Plus provides voice and visual feedback on the quality of chest compressions, such as "Push Harder" and "Good Compressions." The adaptive metronome helps the rescuer maintain the correct rate.



ZOLL Medical Corporation develops and markets medical devices and software solutions that help advance emergency care and save lives, while increasing clinical and operational efficiencies. With products for defibrillation and monitoring, circulation and CPR feedback, data management, fluid resuscitation, and therapeutic temperature management, ZOLL provides a comprehensive set of technologies that help clinicians, EMS and fire professionals, and lay rescuers treat victims needing resuscitation and critical care.

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