



Naval Safety Center

LESSONS LEARNED



LL 20-21

ELECTRIC SCOOTERS II — “We Told You So” Edition

We’ve never wished we were more wrong than when we published our “preemptive” electric scooter (e-scooter) lesson learned in October 2019. With the rising popularity of rental e-scooters across the country in recent years, especially in Navy fleet-concentration areas, we thought it prudent to get the word out about the risks and hazards of e-scooter riding. At the time of publishing the e-scooters LL, we had no reports in our system (yet), but we figured it was just a matter of time. We used examples of human-powered scooters to make our case (*look what happens at single-digit speeds, imagine what happens at 15 mph*). Now, unfortunately, we have the answer — and it’s not pretty. As the mishaps have *rolled in*, 14 out of 21 human-powered and electric scooter mishaps in the last nine months were of the electric type, and the injuries were worse. *Sigh*.



As the popularity of e-scooters has grown over the last several years in the U.S., so have the injuries. A Journal of American Medical Association study published in January 2020 tallied 14,651 e-scooter-related injuries in 2018, more than double the incidents from 2014. Of those incidents, 32 percent involved head injuries. In our database, 20 percent of the e-scooter mishaps included injuries to the head, and all but one involved the extremities. Our e-scooter injury recipients probably wish they heeded the recommendations from our first e-scooter lesson learned, but instead, they’re featured here in Edition II. Here are some examples of the don’ts and more don’ts of e-scooter riding.

- A Sailor and several other members of the command were on a liberty trip to the city and rented e-scooters. While riding along, the Sailor tried a stunt (*actually just a turn, but as you read on, turning seems to be challenging on e-scooters*). The Sailor failed to execute the beginner-level turn, lost his balance, and fell off the scooter to the ground. Our no-turn Sailor fractured his left femur, resulting in 30 lost workdays followed by 92 days on light duty. Comments in the report included, “train the member on the importance of knowing the handling characteristics...” — *Sounds like an aviation command, doesn’t it? It sure was, and it’s good advice for both on- and off-duty operations.*
- A Sailor was riding an e-scooter to his residence one evening when he struck a pothole (*another mishap magnet to e-scooters*), causing him to wreck into a parked car, impacting it with his face and wrist (*he literally face-planted into a vehicle*). A police officer in the vicinity witnessed the event and determined that there was no damage to the scooter or the parked car, and that the Sailor did not require medical assistance (*or so he thought*). The Sailor returned home, believing that his injuries were minor, but the next morning was a different story. The Sailor’s trip to the naval medical center revealed an orbital fracture — *Plain-English translation: He broke his eye socket. Eeesh!*
- One pleasant fall evening, a Sailor rented an e-scooter that he found along the roadway (*just download the app, scan your chosen scooter, and off you go...no skill, no helmet, no fear*). As he was riding on the sidewalk (*which was both unwise and banned by local regulations*), the Sailor noted an unmanned e-scooter blocking his path. It was decision time: 1) Use the advanced technology that modern e-scooters are equipped with: the brake, or 2) Attempt to turn. Our e-scooter Sailor opted for decision 2 (*the high-risk turn as in the first example*) when the front wheel of his scooter got stuck between the grass and the sidewalk and “catapulted him into a crosswalk signpost” (*OUCH!*). The report states the Sailor “failed to recognize his skill level” (*we agree*). The price for finding that out the hard way: a broken ulna (*forearm*) and 27 days on light duty. — *Hopping on an e-scooter and riding down the sidewalk at dusk isn’t the best way to assess your skill level, nor is it wise regardless of your talent. Also, consider the brake as an option...just saying.*

- The Sailor was riding on an electric scooter while on liberty when she turned away to look at something (“Squirrel!”). When she looked forward again, another Sailor was coming in the opposite direction (*for you ship-driver types, Navigation Rule 14 comes to mind here, “Head-on Situation,” but we digress*). Because you’re reading about it here, we’re confident that the Sailors did not “alter their course to starboard...” in accordance with Rule 14. Some attempt was made, but they ended up colliding. One Sailor hit her knee on the pavement and reportedly could not move it. Her trip to the emergency room revealed no broken bones, but she received 14 days light duty — *The price for not maintaining a proper lookout. Sorry, we couldn’t resist that one (Navigation Rule 5).*
- This one reads best using your inner “Fire Marshal Bill” voice (*it’s an old sketch, so web search if you don’t know it*): So ya think e-scooters are safe do ya? Well, LET ME SHOW YA SOMETHIN! Let’s just say you’re in your barracks room and bored to tears, so ya decide to hop on the ole e-scooter and head out to the bar (*almost seven miles away*). After havin a couple a beers (*actually four*), ya figure, it’s time to head back for some shuteye before duty tomorrow. You’re scooting along, enjoying the traffic...and the darkness (*it was after 2230*) when BAM! A pothole jumps outa nowhere and grabs hold of your front tire like the Kraken in Pirates of the Caribbean 2! While in the air, you’re thinkin, “this isn’t so bad, I’m flyin, feeling the breeze,” then BAM! You’re face-first on the pavement with a broken jaw and two broken wrists! Be careful on those e-scooters kids, potholes and scooters are a DEADLY COMBINATION! — The story doesn’t end there. This die-hard Sailor managed to resume scooting all the way to the base gate (about six more miles), where the guards immediately had him taken to the local emergency room. After jaw surgery, two weeks of convalescent leave, an unknown number of light-duty days, and plenty of pain, those four beers probably didn’t seem worth the 14-mile round trip e-scooter ride...at night. — *Don’t drink and scooter shipmates. Please. Where have we said this before? Hint: See Lesson Learned 19-22.*
- Question: Why use the designated scooter and bike lane when you can just scooter down the sidewalk? Here’s one example (*of many*) why not to. A Sailor rented an e-scooter and was scooting down the sidewalk when “a lady stepped out in front of him,” according to the report. The Sailor swerved to avoid impacting the lady (*which was honorable, but we sure wish someone would try the brake*), and rode the scooter off the sidewalk and onto the street — where he should have been in the first place. Our sidewalk-scooting, curb-jumping Sailor (*say that three times fast*) fell in the road, breaking his right forearm. — *Follow the rules, folks. They exist for a reason (broken arm prevention, just for one).*



Key Takeaways / Lessons Learned

Our goal for this lesson is to get you to think and talk about this new form of cheap transportation. Include e-scooters in your safety training, and discuss them with your families. Consider the heightened risks and hazards these e-scooter test pilots showed us. In addition to the four takeaways in LL 19-22 Electric Scooters (**1. Just because you can, doesn’t mean you should; 2. Wear PPE; 3. Know the rules; and 4. Don’t drink and scooter**), here are a couple of additional elements to consider:

1. A good rule of thumb is: Treat e-scooters like bicycles. They are just as fast, but are more prone to wreck. E-Scooters add to the already busy traffic in our cities. Follow traffic patterns like cyclists are required to and stay off the sidewalk. Remember, e-scooters have a brake, so give it a try.

2. E-scooters heighten the risks to pedestrians. Even if you’re not riding one, know that they are out there and add to the reasons why distracted walking is a bad idea, not to mention distracted e-scooting. E-scooter responsibly. And walk carefully, lest you get run over.

This product is posted on the NAVSAFECEN CAC-enabled website at <https://intelshare.intelink.gov/sites/navsafe>, and on the public website at <https://navalsafetycenter.navy.mil/Safety-Promotions/Lessons Learned>.

And remember, let’s be careful out there...