



Naval Safety Center

LESSONS LEARNED



18-05

SHIPBOARD LADDER MISHAPS

“Look Out Below!”

Ladies and Gentlemen, today we are going to be talking about Shipboard Ladder Safety. Thrilling, right?! I imagine you aren't fired up on the topic yet, but stick with me for a minute.

Even if Hollywood won't be making an action movie about the subject any time soon, it turns out ladder falls are a HUGE impact to all of us – not to mention the impact to the poor souls who fall down one.

In FY 2017 alone, inclined and vertical ladder injuries resulted in 14.4% of all personnel injuries and 22.5% of lost or affected work days on surface ships and submarines. Seriously, one-fourth of all lost/affected work days were due to something as simple as going up or down a ladder.

If percentages don't excite you, how about these numbers: 296 ladder injuries resulted in nearly 4,000 reduced or lost man-days. Besides the misery you feel if you are one of those injuries, what about the misery you feel as the one who is absorbing the 4000 lost man days of extra work? With a deployable force that is nominally undermanned by 10% (often greater), loss of personnel due to preventable injuries like these is not a cost we can spare.



So, how are our people getting hurt? The Naval Safety Center conducted a yearlong study to find out. The study discovered that most ladder injuries were preventable and were due to human errors in judgement and spatial awareness. 85% of injuries and 75% of the lost time occurred from Sailors descending ladders. On the flip side, two of the most severe injuries in the data occurred while ascending ladders, so going up isn't a cake-walk either. Here are some timeless examples:

A servicemember (SVM) was moving about the boat (yes, it was a sub) taking logs. “While ascending a ladder,” the report states he “prematurely grabbed the handrail,” and thus missed it. As a result, he slipped and fell backwards. He caught himself but struck his upper back and shoulder on the ladder well.

SVM was trying to evacuate an area during a toxic gas leak and “struck her knee against the ladder during the rush.” – Toxic gas is a good reason to leave quickly, but be careful. A busted knee may leave you stranded in the toxic gas environment.

SVM was descending a ladder well and “thought he was on the last step.” He wasn't. He fell from the 3rd step from the bottom, injuring his right ankle. He turned around and began climbing the same ladder to report to medical. While he was ascending, his foot caught underneath one of the steps and he fell forward into the steps striking his left shin. – Ouch. The report doesn't mention if someone had to carry him the rest of the way.



SVM was transiting up a ladder. As he stepped on the 3rd step, his foot slipped. He first fell forward onto his knee, and then fell backwards to the deck, landing on his back. Left knee sprain and upper back sprain.

A Sailor rushed down ladder well and fell while “racing to get to quarters.” He did not have three-point contact with the ladder. His injuries weren’t stated, but it must’ve hurt because he lost three workdays.

SVM was running up a ladder while mustering for a man overboard. She tripped, tried to catch herself, and her hand got caught in the handrail causing her to tear a ligament in her ring finger.

A Sailor was rushing to muster when he tripped down the ladder he was descending. He ended up with his legs splitting the bottom stanchion of the handrail (...pause to think about that one for a moment). I'll spare you the details except to say that surgery was definitely required. He somehow managed to get up and continue on to muster, at which his LPO noticed his severe bleeding and had him transported to the hospital. – There is no where you have to be fast that is worth that kind of pain.

SVM was going up a ladder well, but didn't have either hand on a railing...

SVM was walking up a ladder well and was not paying enough attention...

SVM attempted to go up the vertical ladder with logbook and keys...(and so on...)

Lessons Learned

Ladders are such a routine part of life on Navy vessels, but we can't just take them in stride. The steep (or vertical) inclines, all metal surroundings, and frequently slick conditions (not to mention ship's movement) all increase your risk. Rushing up or down the ladder, distraction (whether mental or text induced), or attempting to carry even a small item increases our risk level exponentially.

1. **Slow down.** Just like the fire drills in elementary school, “Walk, don't run”. Rushing may seem faster, but when you wind up incapacitated on the deck, it isn't. To borrow an aviation maintenance saying I've often seen, “Slow is smooth and smooth is fast”.
2. Ladders are not a good place to multitask. Just go up or down. Climb now, text later.
3. Coffee cups can be a killer. Even if you are just carrying something small, be more careful. And if you can put the keys, book, etc. in your pocket, do it.
4. Be aware of conditions. Condensation and oil just make it all worse. Clean it up and use the handrails.
5. Don't slide. I know it is tempting, but three points of contact will save you a painful experience.

Recommendations

1. Brief this lesson to all Sailors (and Marines, because they are on ships too).
2. Call out your shipmates and fellow Marines if they're ignoring the lessons. “Friends don't let friends fall down ladders”. Besides being a good friend, remember you have to take up the slack while they are LIMDU.

And remember, “Let's be careful out there”