



Man Overboard – Prevention

The best man overboard recovery is the one which never needs to occur. If you stay aboard, you will not have to be pulled out of the water.

The purpose of this note is to discuss some “healthy habits” to exercise while aboard to *avoid* you or your fellow crewmembers going over the side.

These “habits” fall into four general categories

- One Hand for Yourself, One for the Ship
- Tether Yourself to the Boat and Keep Your Footing
- Sail Smart – don’t put crew on deck at risk
- Rig Your Boat for Safety

“One Hand for Yourself, One for the Ship”

This is one of the oldest adages in sailing. It always bears repeating. Hold On! Unless you are a professional foredeck man, there is no reason to be working where you have to trust only your harness or other gear to keep you aboard. An unexpectedly steep wave or even a powerboat wake on a Sunday afternoon can flip you off your feet, or over the side. Doing something that requires two hands? Wrap yourself, or at least one arm, around a stay, shroud or pulpit next to the task.

Tether Yourself to the Boat, and Keep Your Footing

It is safe to say that during ARAGORN’s round-the-world trip we were tethered to the boat every moment we were above decks. This helped in unexpected times: during a two-day motorsail in no wind in the Mediterranean, an unseen wake suddenly tossed the boat around, and would have heaved one of us overboard had we not been tethered.

Some important habits when tethering:

1. Don the harness belowdecks, making the straps tight, and make sure your tether is properly secured.

2. Clip on to a strong point on deck outside the companionway before mounting the companionway steps. When exiting the companionway, your weight is very high and you may not be used to the motion of the boat. It is one of the most likely locations for a trip into the drink. You can move to another clip point or to a jackline once you are safely in the cockpit.
3. You really should not use the lifelines or running rigging for clip points. Both are too likely to fail.
4. While you should look at **other papers on the CCA website** about selecting Tethers and Harness/PFD combinations for yourself, I prefer a tether with two separate legs coming off the attachment shackle, one about three feet long, one about six feet. With this arrangement, you *can always be clipped on*, as you can clip in with the free leg of the tether before unclipping the one in use. I use the longer leg most of the time, as it lets me work around the cockpit and walk around on deck without having to re-clip. But I find the shorter leg very handy while steering (you don't fall far if you slip), and for clipping on when working in a small radius, e.g. at the base of the mast.
5. When moving fore and aft on deck with a harness and tether, you can use the jackline for additional support. If the jackline is tight, pull up on the tether with one hand, and the tension provides additional "weight" to the soles of your feet, increasing the sticking power.
6. Move fore and aft up on the weather side of the deck. If you slip, your tether (or your hands) will keep you aboard, at worst in the lee scuppers. If you need to work on the lee side (e.g. changing a working jib sheet, inspecting a lee shroud) then move forward to the weather side to the mast, and cross over to the lee side just forward of the mast. Clip on with the free leg of your harness before you unclip, and you can get to the lee rail safely, and clipped on.
7. You need to keep your footing. Side decks are frequently filled with round lines. If you do not feel lines under your feet, your foot may roll over them, dropping you. I prefer bare feet, especially in warmer waters, as you can then feel your grip better. Fleet Surgeons and others frown on this practice, and, indeed, I have seriously jammed a toe more than once. But I like to feel the deck under my feet. When wearing boots or shoes with heavy soles, proceed more slowly, and make sure you have good footing on every step.

8. In real weather, all seamen crawl on deck. You can do the same whenever you feel it necessary.
9. There is almost no reason to run on the deck. You risk bad footing. A sail flogging for an extra minute is not as bad as a person who fell and broke a rib, or who fell overboard.
10. Men, use the head below. If you are hand-steering in bad weather, use the leeward cockpit drain. Do not use a lee rail.

While doing a dawn check of the boat, Dick uses the weather side to go forward. His tether is on the jackline (near left foot), and he is holding on to a shroud with one hand to make sure he does not slip. It is going to be a pretty day with good sailing.



Sail Smart – You Can Reduce Crew Risk

There are ways to sail the boat to increase safety, and here are some ideas. Cruisers have an advantage here. Racing sailors have the notion they always need to point the boat at the next mark, even if that raises the risk for crews and for gear. Racers, please unlearn some “cowboy” habits, and sail safer by sailing smarter.

1. Keep a weather eye, and change down early. Remember the adage: “the time to reef is when you first think about it”. The same goes for reducing the size of your headsail. In most cases you will not lose much speed.
2. An easy way to reduce crew risk is by running off, away from the true wind when someone has to go on deck. Assuming you have sea-room, a very broad reach or run at an apparent wind angle of about 140 degrees off the wind will do two major things: reduce the heel of the boat to almost a level deck, and reduce the apparent wind speed. This is much kinder to a crew working on deck. I have used this tactic in gale conditions to make it (almost) pleasant to tie in the third reef tack line, or to put a storm staysail on the inner forestay. But it is handy in just twenty knots too. If you want to make things easy, level the boat and decrease the apparent wind by running off.
3. Establish and practice regular evolutions, including a squall drill. For example, for our Squall Drill on ARAGORN, we run off at 150 degrees apparent wind angle where the jib is sagging in the wind shadow of the main, and then roll the jib by hand from the safety of the cockpit. This gets rid of a big fraction of our sail area. We then steer back to our course, and higher if we need to reef more (but hopefully, we have studied Point One above and reefed already). Again, racers would hold on for the last minute, and then keep their course while three crew rush to forward to reduce sail area. I believe our method is safer by far. Think about all evolutions you need to practice, and think how you can make them safer.
4. Especially on short-handed boats, make sure there is always someone in the cockpit “spotting” you if you go on deck. Even if you have told someone below cooking dinner that you are going forward, that person may not hear you if you slip over the leeward rail quietly. Have them clipped on in the cockpit (maybe under the dodger) to watch you until you return. Racing sailors need to have someone other than the helmsman spotting crew.

Folding the staysail in mid-Atlantic is easier as the boat has been run off to a broad reach.



Notice how level the deck is.

Rig the Boat for Safety

Most boats “out of the box” do not have all the items necessary to keep crew connected to the boat. Even if your boat was previously owned you may have to make changes.

1. Make sure there are places to which you can clip your tether. Some important ones include (but are not limited to):
 - a. Just outside the companionway, for crew going to and coming from the cockpit. They need to be able to clip on before stepping on the bottom step of the companionway ladder.
 - b. One or more clip points in the cockpit, to be used while you work winches.
 - c. Where the helmsmen will stand. You may want two, one on each side, so the helmsman can clip on with the short lead to keep from slipping to leeward in a lurch.
 - d. The jacklines. You must be able to go from cockpit to bow without unclipping. This arrangement varies from boat to boat based on size, and is dealt with **in other CCA notes**. But on ARAGORN, the jacklines run from the aft quarter up the deck to the bow cleats. They are inside the shrouds, and lay against the cabin house. All lines

running athwartships run under the jacklines. We can go from behind the wheel to the bow without unclipping.

2. Most boats can be re-rigged so all reefing can be done from the cockpit. One less trip on the deck during a busy maneuver means a large increase in safety.
3. Also make sure all regular sail controls are led to the cockpit, including the vang and the jib furling line.
4. Walk around your boat, both at rest and heeled over and think of ways of making it safer. Do you need teak foot cleats behind the helm, better toe rails, non-skid tape on the fore hatch, another mast step? What about bars on the outside of the dodger as you move forward (a favorite place to fall off from the lee waterway)? Can you add another hand grab anywhere? These and other ideas will pay off handsomely in improved safety.
5. Another article on the CCA Safety-at-Sea site deals with preventers. These are one of the most important safety features on a sailboat.
6. Remember the boom can also cause problems when hoisting, reefing, and striking. A vang which holds the boom up as well as down, or some kind of boom crutch is important to control a wildly swinging boom.
7. Mainsails can be fitted with a Dutchman system, or some lazyjack systems which mean that reef points do not have to be tied into the sail to keep the bunt from sagging. Such systems eliminate a dangerous time when crew are leaning over a swinging boom to tie in points.

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