

## SAFETY AT SEA

A well-found vessel should carry a variety of safety equipment – everything from lifejackets (PFD's) and flares to a well-stocked first-aid kit. All of this equipment has a way of making the sailor feel a bit more comfortable while traveling in an environment that is quite hostile to most land-based air breathing mammals. This feeling of comfort may be somewhat misleading. If you look at all of this so-called safety gear more closely, it's soon apparent that it is all after-the-fact stuff. You use it as a last resort after you've gotten yourself into the mess that you shouldn't have gotten yourself into in the first place.

**Collisions** happen most often when both vessel operators either don't know or don't follow the rules-of-the-road. If we keep booze out of the equation (and we should) there is hardly a reasonable excuse for any contact between vessels. There are two sets of rules; one is for inland waters and the other is for offshore (or outside the COLREGS Line of Demarcation). If these terms are gibberish to you, or you wouldn't know the COLREGS line if you were standing on it, We suggest that you study up. Part of the rules concern fog signals. Most small boats carry one of those honkers with the replaceable pressurized can of air. You should also have one that you blow into. Those air cans have a way of running out just when they shouldn't be running out leaving you with a pathetic squeak that wouldn't carry twenty feet. Do you know the various fog signals? How about a fog bell? Do you know how and when to use a fog bell? Do you have a radar reflector? Are your running lights working? And how about the lighting on other boats? Do you know what a trawler looks like at night or in the fog? Or a submarine? Or a tug towing a barge? The "Rules" should be studied and memorized. There won't be time to be consulting the book. Do you post a lookout? The Rules say that you must. The helmsman cannot be expected see everything. The lookout has to. Our guess is that over 90% of all collisions are avoidable.

**Fire** at sea is the worst of all situations. You can't call the fire department. It's better to prevent fires than to fight them. There are many causes for shipboard fires. 12-volt electrical systems can carry a lot of amperage and overloaded circuits can get hot. Use the correct fuses, don't overload circuits, prevent wiring from chafing, and keep covers on battery boxes. If you're installing new electrical equipment, make sure that the wiring is done to the ABYC code. If your boat is more than 10 years old, it may be time to rewire everything to the new code. It's not that much of a job. Also check fuel lines regularly, keep the engine space clean and drip free, and after you've finished oiling the teak, take the oily rags ashore. Follow all instructions regarding galley stoves and cabin heaters and be particularly careful with those over-the-stern barbecues. Don't smoke anything below deck and be more than a little careful with that little gimballed kerosene lamp. Scrimping on fire extinguishers is not prudent. Those little ones look cute on the bulkhead, but may not be sufficient to fight a real fire. We've seen several small power and sailboats that carried several 5lb dry chemical types along with a 5lb CO2. Knowing how to use the thing is more than just pulling the pin. The directions should be memorized. Dry chemical types should also be shaken up occasionally to avoid packing of the powder. Again, you should have the knowledge before you need it. With the exception of those caused by lightning bolts or meteorites, all fires are preventable.

**Falling over the side** is a major issue. Even when the fall-ee is wearing a PFD, it is a major life-threatening event and shouldn't be allowed to happen. The Gulf of Maine waters are dangerously cold even in the summer months making immersion time a major concern. The best life jacket in the world won't get the victim back on board. What provisions have you made to do this? A water soaked, pre-hypothermic victim may not be able to climb a boarding ladder. What shipboard rules do you follow to preclude this from happening in the first place? Have you ever conducted an overboard drill? How effective are your lifelines? Do your stanchion bases have strong backing plates? Is everything in good repair? Do you use safety harnesses at night and in heavy weather? What do you attach them to? Are there better places? People go overboard for many reasons. None are acceptable.

**Running aground** or clipping a ledge is common. Anybody who says that he hasn't done it has either never sailed the coast of Maine or may have memory problems. Every time that it happened to us, it was our own fault - generally the result of poor navigation or inattention. We don't do it anymore – we are too old for that sort of thing. LORAN and GPS are great innovations, but they should be valued only as second opinions for a good DR plot. All electronics systems are prone to failure and, given that old Murphy did a lot of boating, the failure will always happen at the worst possible time. Learning proper

traditional navigation skills should be a priority. The only device on board that must be believed is the ship's compass. But keep in mind that any compass right out of the box is useless regardless of price - it has to be accurately corrected and its deviations noted and then applied to navigation. Getting your compass accurately compensated and developing basic navigation/plotting skills should be on the "must" list. Can you fix your position by taking bearings? Do you have a device on board that allows you to do this? Do you know that a running fix has nothing to do with athletics? Can you take one? There are millions of "mickies" along this coast. Your goal is keep your personal contacts with them to a minimum.

**Fog** may come in on little cat's feet but it can be a tiger to deal with unless you've developed those traditional navigation skills, gotten good at chart reading, and memorized the fog signals of other vessels. Sounds are distorted and the direction to a particular sound may be misleading. Do you know the different sounds produced by navigational buoys - bells? Gongs? Whistles? Can you estimate the speed of your vessel without reliance on electronics? Can you then make your way with only your compass, the chart, and a timepiece? By the way, are your charts up-to-date? Along the Maine coast, fog is a given. Sooner or later you'll have to learn to effectively deal with it.

**Safe Anchoring** is no mystery. Safe anchoring is more a function of how and where you do it than what type of anchor you use. You should also carry more than one anchor including a separate chain and rode. Aside from just having a backup, there are many circumstances when one is not enough. Knowing where you are, and how to read the chart for bottom conditions takes care of the "where". The "how" takes some judgement. What is the state of the tide? Got a tide calendar aboard? How long will you be there? What is the depth? Depth sounder working? Got a lead line for backup? How much scope (not the mouthwash) should you run out? What is the state of the wind and sea? What will be the effect of tide and wind changes? Effectively anchoring takes some knowledge and skill but nothing that anyone can't learn quite easily.

**Sinking** is always a concern, but sinkings that are not related to collisions or groundings are rare. However, every boat should have several bilge pumps. At least one should be a manual type that can be operated by the helmsman. Electric pumps are great, but again they have a way of failing at the worst possible time. Make sure that the pumps are provided with strainers. There is often all sorts of junk that floats around in the bilge of any boat that can foul the best pump. In light of this, keeping the bilge clean should be considered a safety issue. And let's not forget the old bucket - nothing beats it for volume or speed. All seacock hoses should be double clamped. If one clamp fails you still have the other. A wood plug should be provided for each seacock to seal it if, in the worst case, not only has the hose failed but also the seacock is frozen in its open position. Of course, if seacocks and hoses are inspected and properly serviced every season along with the other things below the waterline, the pumps would never have to be used at all. However, they would still give that feeling of comfort.

**Heavy weather** is never welcome but regardless of what the forecasters say or the Farmer's Almanac, the howlies have a way of dropping in occasionally. Power boats take some well developed skills to operate in adverse conditions of wind and sea. Much of this has to be learned by practice. Sailboats are similar, but not reefing early enough is the most common situation that can make handling even worse. You keep putting it off until you wind up doing it under much less than ideal conditions. Very often the weather reports are inaccurate or not local enough to cover the specific area of ocean that you're sailing around in. Several years ago we took an afternoon sail to Portland to see the USCG training vessel Eagle. The local weather report stated that winds would be 5 to 15 knots. We left Cousins Island with a full main and 150% genoa and returned with two reefs in the main and a storm jib. The weather report hadn't changed. A knowledge of basic weather patterns and their effect on local sailing conditions is a good thing to have. You can generally see the stuff coming well before you have to do anything about it. A good boating course will cover the basics of weather knowledge. Getting comfortable with heavy weather handling takes time and experience but it makes for more fun and safe cruising.

**So here we have it in a nutshell:** Avoid collisions by knowing and practicing the Rules-of-the-Road. Learn shipboard fire fighting and fire prevention and oversize your fire fighting capacity. Keep everybody on board by developing safe routines for moving about above deck and by maintaining the "keep 'em aboard" systems. Keep off the rocks and moving in fog by becoming a good navigator in all weather

conditions - know where you are, where you've been, and where you're going without reliance on high tech magic. Sleep soundly with a well-set and located anchor. Keep afloat by maintaining the below waterline structure and through-hull penetrations, while planning for the worst with more than adequate bilge pumping capacity. Keep your mast up and your blood pressure down by being aware of changing weather conditions, by learning heavy weather operations and helmsmanship, and by reefing when "reefing" first crosses your mind.

There are many local organizations and marinas that give safe boating courses and workshops. Often held during the winter, you'll not only gain a lot of valuable knowledge but it will make spring come that much more quickly.

You may notice that nowhere here have we discussed how to operate the contents of the flare kit (read the directions), or what type of PFD's are most appropriate, or first aid for snake or shark bites, or how to call for assistance on the VHF radio. You should know about all of these things, but avoidance should be your primary drive. If you don't get yourself into trouble in the first place, you may never have to use any of the "safety" gear. That's the way it should be.

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