

Heavy Weather Sailing

Best Sailing Tactics for High Winds and Waves

By [Tom Lochhaas](#)

Many sailors, both beginning and experienced, fear storms as the greatest danger on the water, even though more [emergencies and fatalities occur during times of relative calm](#). Nonetheless, strong winds and high waves can wreak havoc on a sailboat, and any sailor who might be caught by even a summer thunderstorm - or a longer-lasting and greater storm offshore - should know how to stay safe in heavy weather.

Many lengthy books have been written about storm sailing tactics, and a short article like this can only introduce key information to start thinking about how to stay safe if you're caught in heavy weather.

It's often said that boats are stronger than people - meaning your first priority is to protect yourself. Be sure to have and use the right [safety gear](#), such as PFDs and harnesses/tethers to keep you on the boat. Recognize also that the boat's motion will be more severe in storm conditions, and take action early to prevent injury and [prevent seasickness](#) that can further endanger your safety.

The following sections consider issues and strategies for keeping the boat under control in storm conditions.

Avoiding Shallows

When heavy weather begins or threatens, the first impulse is often to drop the sails, start up the motor, and head for land. If you can safely reach a harbor and return to a dock or mooring, this may be your safest option. But be aware that wind and waves can rapidly turn shallow areas or narrow channels into a more dangerous place than open water, especially if the storm will be short-lived and it's mostly a matter of waiting it out. Waves become steeper and more likely to break in shallow areas, making it difficult to control the boat. Consider the risks if your engine were to die and the wind rapidly blow you onto the rocks or other obstructions. If the wind is blowing toward shore, it can also be risky to attempt to anchor, because the boat may go aground if the anchor drags - and it is difficult and sometimes dangerous to try to reset an anchor in storm conditions. You may have better options staying in open water and riding out the storm using the tactics described below.

Reefing

As soon as the wind begins or is anticipated to increase, it's time to reef the sails. The old saying is that if you are wondering whether you should reef, then it's already past time to do so. You don't want a lot of sail up when a strong gust hits, potentially leading to capsize. It's also much easier to reef the mainsail or furl the jib while the wind is still manageable - and it can be dangerous to have to leave the cockpit to reef the main or drop the jib once the boat is being tossed or strongly heeled over by the wind. See [this article](#) for more information about when and how to reef.

Remember that if you are sailing downwind when the wind increases, you feel its effects less and can be shocked to see how hard it's blowing when you turn up into the wind to reef. Always pay attention and reef early.

Remember to monitor changes in the wind so that you can reef early when it's easy rather than late when it's difficult or dangerous. You can learn to [read the wind](#) or use an inexpensive [handheld wind meter](#).

The following storm tactics are more applicable when offshore or near shore and expecting the storm to last for some time.

Storm Sails

Offshore voyagers typically carry special sails for use in high winds. Regular sails can be reefed or furled only so far and still maintain an efficient shape, and the fabric of regular sails is generally too light for high winds. A storm jib used with or without a trysail replacing the main generally allows one to continue sailing in stronger winds, usually on a course that minimizes the effects of waves. Racing sailors, for example, usually have a selection of sails and may prefer to keep going rather than wait out the storm with a different tactic that would essentially stop the boat's

progress. Many coastal and recreational sailors do not carry these extra sails, however, and prefer a different strategy, like heaving to.

Lying Ahull

Lying ahull simply means dropping the sails and letting the boat fare for itself, possibly while you go below to seek shelter. This strategy may work in limited situations when the waves are not too big and the boat is far enough from land and shipping channels that it doesn't matter how far the boat drifts downwind. In some cases it may be necessary to lie ahull to attend to an injury or simply because one is too exhausted to continue active strategies. If the waves are large and breaking, however, there is a significant risk of the boat being rolled and capsizing because it will tend to lie broadside to the waves. Never attempt this in an open boat that would rapidly fill with water and sink; a larger boat with a closed cabin should bob back up. Still, this is seldom the preferable approach to take in a serious storm.

Using a Sea Anchor

Offshore voyagers are more likely to have invested in a sea anchor, which is like a parachute deployed underwater to keep the bow pointed into the wind and waves. Breaking waves cause less damage over the bow than from any other angle, and the boat is less likely to capsize or roll when facing large waves. A sea anchor can be expensive, however, and takes time and skill to deploy - this is a strategy used for a serious storm that will last for some time, not a passing squall or thunderstorm.

Heaving-To

Heaving-to is a time-honored storm tactic preferred by many sailors. The boat is turned close to the wind, the jib (partly furled or smaller jib hoisted) is backwinded, the helm is locked into position, and the boat slowly jogs along without turning broadside to the waves (as when lying ahull). See [this article](#) for how to heave to. This is a valuable skill for all sailors, and it's a good idea to practice it in your own boat to know how best to accomplish it when needed.

An advantage of heaving to is that you don't have to stay at the helm but can go below (if it is safe to do so) or duck beneath the dodger, and the boat remains pointed close enough to the wind that it is less likely to be rolled by a breaking wave. In addition, the downwind sliding motion of the hull produces a slick in the water that makes it less likely for a wave to break on the boat.

Heaving to using a sea anchor is one of the best conservative storm tactics. The anchor is adjusted off to one side to help the bow point closer to the wind than when heaving to without a sea anchor, but the boat still drifts back slightly to make a slick. World-traveling Lin and Larry Pardey's video "Storm Tactics" and book "Storm Tactics Handbook" argue persuasively for this technique and illustrate how it is accomplished.

Running Off

The final heavy weather tactic, used by some accomplished sailors, is to run off downwind. Reduce sail as needed, and in true storm-force wind you can continue sailing downwind "under bare poles" with no sail at all. As the wind increases, the greatest danger is going too fast, even without sail, in which case the boat may come down a large wave and bury the bow in the back of the wave in front, causing the boat to pitchpole end over end or otherwise capsize. To slow the boat, sailors historically trailed long, heavy lines off the stern; modern sailors can use a special drogue for that purpose.

While some sailors swear by running off, this tactic requires constant skillful steering. If the stern is not kept perpendicular to approaching waves, a wave can push the stern around to one side, causing a broach and likely capsize.

Other Resources

As noted earlier, these brief descriptions serve only to introduce tactics for heavy weather sailing. Any boat owner who may ever be in a high winds situation, however, should be prepared to take appropriate action - at minimum by being familiar with reefing and heaving to.

Start with a good book on seamanship, such as ["Chapman's Piloting & Seamanship"](#) or ["The Annapolis Book of Seamanship"](#) - both with a good chapter on heavy weather. The ["Seaworthy Offshore Sailboat"](#) is an excellent starting place for preparing your own boat for offshore sailing conditions.