Small Sailboats Blog by Captain Floyd Jay Winters

Avoid Capsizing

Capsize Recovery

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Steering Without Tiller

Avoid Capsizing a Small Sailboat

Capsizing is when a boat tips over onto its side or even **TURTLES**, which means it might flip completely upside down. For a small sailboat sailor, this is often simply part of learning how to sail. You make a mistake and get wet. Then you must right the boat, get back in and start sailing again. We'll cover righting the boat in a future blog. It's not very hard. So, for now, let's look at how to prevent a capsize:

1. **Sit facing the sail.** When the wind blows the sail to one side of the boat, the boat will **HEEL** or lean in that direction. You can **counterbalance** this force, by sitting opposite the sail. This is especially important when the sail moves from one side of the boat to the other side after a **TACK**. If you do not quickly duck under the boom and change sides as the sail moves, there is often a good chance of capsizing.



2. **HIKE** or **lean out on the High side** (the windward side) if the wind causes the boat to heel too much to one side. You may have to lean way out, with your head and shoulders out over the water if necessary as you balance the boat. It's fun. Enjoy the ride! You can hook your feet under a hiking strap if it is available.



A Hiking Strap on an Opti



A Hiking Strap on a Sunfish

- 3. When in doubt let it out! If a sudden gust threatens to knock the boat over, ease out the mainsheet or jib sheet part way, to spill the excess wind out of sail.
- 4. Use the tiller toward the sail to point the bow a little closer to the wind and slow the boat down if a sudden gust threatens to knock the boat over.
- 5. Do **CONTROLLED JIBES.** On a jibe (turning downwind to the side the sail is on), the boom travels a longer distance and never slows in the center of the boat, as it does with a tack. Therefore, during a jib, the sail can come across with a dangerous momentum. So, before jibing, it is wise to **reduce the**

- distance the boom can travel by first pulling in your mainsail, as you slowly turn downwind. Then you can slowly let the sail back out after you complete the turn.
- 6. **Do NOT let the bow dig into the water.** If the bow starts to dip too deep into the water, it may **PITCH POLE** and roll over the front of the boat, end over end, and then capsize. To prevent this, if you see your bow dip, sit back further in the boat to lift the bow higher, or change your heading to prevent the wind from forcing the bow down.

I hope this has been helpful. For the complete *Sail Sailboats Made Fun and Easy* Manual, for only \$9.00, click on the **Buy** link. If you like the way the information in these blogs are presented, consider buying *Learn Sailing Fun and Easy: With Memory Tips and Water Riddles* on Amazon at https://www.amazon.com/Learn-Sailing-Fun-Easy-Riddles/dp/B0892DP7FW

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Capsize Recovery on a Small Sailboat

CAPSIZING is when a boat tips over onto its side or even **TURTLES**, which means it might flip completely upside down. It is not a big deal on a small sailboat and a lot of my students enjoy an occasional capsize, especially on a hot day.



A Capsized Sailboat that has Turtled

So, if you have made a mistake and did not hike to the high side after a tack or jibe, or you did not ease the main after a heavy gust of wind, and you suddenly find yourself int the water, you will need to know how to quickly right your sailboat:

Righting a Capsized Small Sailboat

First of all – STAY WITH THE BOAT. It will float. If you need help, it is easier for rescuers to find a boat than to find a swimmer. Start on the top side of the boat (the side the sail and mast are on) and check the following, from bow to stern after a capsize:

A. Make sure the centerboard or **Daggerboard Is Extended All The Way** out or down.

B. Make sure the Mainsheet And Jib Sheet Are Released (and not tangled), otherwise once the boat is righted, it will be under power and may sail away or blow over again before you can get back on.

C. Make sure the Tiller Is Not Tangled in the bridle line or traveler at the stern of the boat.

- 1. Try to **Maneuver The Bow Into The Wind**. This will help blow the water off the sail as the boat is righted. The less water on the sail, the easier it will be to right a capsized sailboat.
- 2. If your boat has a jib, furl it in, if possible.
- 3. While keeping in contact with the boat, swim around to the bottom side of the boat.
- 4. Pull Down On The Bottom Tip Of The Extended Daggerboard, using it as a lever to right the boat. If that does not work, you may have to climb up and stand on the very end tip of the daggerboard to provide as much leverage as needed. With your feet on the end of the daggerboard, reach over to the side of the boat and push your feet down as you pull up on the side to right the boat.

A small sailor may find it is necessary to climb on top of the daggerboard to use every pound of possible weight. But if you cannot seem to pull yourself up, toss the free end of the mainsheet over to bottom side, next to the side edge of the daggerboard, and use the line to help pull yourself up.



Pull Down On Daggerboard to Right the Boat

When the boat pops back up right, pull yourself in. Then for balance, if necessary, quickly make your way to the windward side (the high side) of the boat. Once you are safely in and have the boat balanced and under control, make sure there are no dangerous objects that you may be blown into. Then take a few moments to relax; and look around for any valuable objects that may be floating in the water.

Note: If your sailboat turtles, or turns completely upside down, the process is basically the same. However, you may have to climb on top of the bottom of sailboat and from there, grab the end tip of the daggerboard. If you find it too difficult to climb up, you may use the rudder housing as a step. Once on top of the bottom, slowly pull the tip of the daggerboard to the lee side, until the boat rolls back over and up.

I hope this has been helpful. If you like the way the information in these blogs are presented, consider buying *Learn Sailing Fun and Easy: With Memory Tips and Water Riddles* on Amazon at https://www.amazon.com/Learn-Sailing-Fun-Easy-Riddles/dp/B0892DP7FW

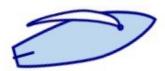
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How does Lift work? A Lift Demo

LIFT is a force that **pulls** the top of an airplane wing up and the outside part of a sail forward. The curve on the top of an airplane wing provides lift as the airplane speeds down the runway. A sail must have a concave wing-like curve to provide lift and power to pull the boat forward when heading towards the wind.

The air moving over a curved part of a wing has a longer distance to travel and therefore must go faster to have the same travel time as the air moving along the lower, flat surface of a wing. This creates a low pressure and considerable **LIFT** that can pull a sailboat forward. As you can see below, the shape of the sail on a sailboat is similar to the shape of an airplane wing.



DEMO: Take a piece of 8½ by 11-inch paper and hold it by the outside side edges between your thumbs and index fingers. Position your fingers about 1/3 of the way from the bottom of the paper, allowing the other 2/3 to extend away from your body. Move the paper close to your mouth. The 2/3 of the paper that extends beyond your fingers will naturally hang down. However, if you blow across and over the top of the paper and it will rise up – that's **LIFT**!



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Steering without a Tiller

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Sometimes tillers snap or rudders fall off. Although you may have a hard time getting your boat back in to shore, fortunately, not all is lost if this occurs while you are out at sea.

- 1. You can make your small sailboat **turn upwind by leaning inward** or moving your body weight to the leeward side of the boat. As a reminder, before tacking a dinghy, move your shoulders and weight inboard slightly to get a bit of leeward heel to assist in heading up.
- 2. You can make your small sailboat **turn downwind by hiking out** on the windward side of the boat.
- 3. If your sailboat has two sails, you can make your boat turn **upwind** if you **trim the main** in and ease your **jib out**. You can remember this because if you accidentally let go of the tiller (we all have), the mainsail tends to naturally point a boat into the wind.
- 4. If your sailboat has two sails, you can make your boat turn **downwind** if you **trim the jib** and ease your **mainsail out**.
- 5. If you have a paddle, you can use it to act as a small rudder.

Every once in a while review these techniques. They may save your butt some day.

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