What is barotrauma?

When an angler brings a fish up quickly from deep water, the gas in the fish’s swim bladder expands as the pressure they are under decreases. Barotrauma occurs when the bladder overinflates. This causes stress and injury to the fish and prevents the fish from swimming back to its original depth, making it easy prey for birds and other predators.

What are the signs of barotrauma? Fish with barotrauma will float on the surface. Their eyes may bulge out of their heads, their stomach may be pushed out of their mouth, and they may have bloating in their stomach and intestines.

Which fish get barotrauma? When fishing in over 30 feet of water, any fish can get barotrauma. Main fish of concern in the Gulf of Mexico are groupers, snappers, and other reef fish.

What can anglers do to help? Fish can recompress and recover with your help. If signs of barotrauma are present, the proper use of venting or descending devices can often increase chances of survival.

Recompression tools / descending devices

These devices use release weights to force the fish down to at least half its original depth. They are successful if used quickly, ideally within two minutes of landing the fish. Types of recompression tools / descending devices include:

Weighted hook or clamp – An inverted barbless hook or clamp with a heavy weight. Attach the hook or clamp to the lip of the fish and allow the weighted line to carry the fish back to the appropriate depth. Release the fish with a quick tug.

Inverted crate or net – A milk crate or crab drop net that has been modified with weights. Attach a rope to the net or crate and place the fish inside. Swiftly invert the net into the water and lower to depth. Once the depth is reached, pull the crate or net back up.

Pressurized release tools – A pressure activated clamp that attaches to a fishing pole. Clamp the tool onto the mouth of the fish and lower into the water; it will automatically release once the assigned depth is reached.

Venting

A hollow needle is used to puncture the swim bladder and release excess gas. The tool is inserted under a scale 1 to 2 inches behind the pectoral fin at a 45˚ angle towards the tail of the fish away from the head—just deep enough to release gas. This method is extremely risky as it can puncture other internal organs.

Taking time to properly release and descend fish that show symptoms of barotrauma will help contribute to maintaining a sustainable fishery. Additional ways to reduce stress on the fish include: handle it as little as possible, release while still in the water if possible, use heavy enough tackle to land it quickly, and only gaff a fish you intend to keep.

How to prevent barotrauma?

Stop fishing once you have reached your possession limit and no longer plan on keeping your catch. Switch fishing spots and/or target different species less susceptible to barotrauma.

Learn more about preventing barotrauma at: https://swfsc.noaa.gov/barotrauma/