

ANGLING COMPONENT	TOPIC	RECOMMENDATION	RATIONALE
Hook and Bait Type	Barbed vs. barbless hooks	Use barbless hooks; crimp/file barbs on conventional hooks	Hooks without barbs, crimped, or reduced barbs can decrease handling time and tissue damage while generally resulting in similar hook-up and landing rates as hooks with large barbs.
	Circle vs. conventional "J" hooks	Use circle hooks when fishing with live or cut bait	Circle hooks result in decreased frequencies of deep-hooking and a subsequent decrease in air exposure time due to ease of removal. However, limited evidence suggests decreased capture efficiency in some situations.
	Single vs. treble hooks	Use single hooks; consider replacing treble hooks with single hooks on artificial lures	Treble hooks on artificial lures, especially when in tandem and barbed, increase air exposure time due to increased difficulty of removal.
	Artificial lures vs. natural bait	Use artificial lures when possible and practical	Natural baits are commonly ingested more deeply than artificial lures, resulting in longer hook removal time and consequently greater air exposure.
Playing and Handling Fish	Playing time	Reduce playing time to a minimum by using appropriately rated angling gear for the size of fish targeted	The length of time a fish is played is positively correlated with the amount of physiological disturbance experienced by an angled fish as well as the time required for complete physiological recovery.
	Water temperature	Exercise care if angling during extreme temperatures	High water temperatures is correlated with increased physiological disturbances and increased probability of post-release mortality. Air exposure during extreme cold can cause tissue damage to the gills and eyes.
	Landing nets	When landing a fish with wet hands is not practical, use nets made with knotless nylon or rubber net materials	Coarse, abrasive, and knotted net materials will remove the important slime coat that aides in protecting the fish from outside infections.
	Venting deep caught fish	Do not vent the swim bladder of caught fish	Consensus among studies suggests that venting can actually decrease survival of fish captured from deep water. Further, angling fish from deep water can have adverse physiological effects, decreasing the likelihood of post-release survival, and should generally be avoided.
	Holding a caught fish	Wet hands first and hold the fish horizontally, using a jaw gripping device that can swivel 360° when handling large sport fish	Wet hands minimizes the amount of slime coat removed and a horizontal hold reduces the risk of damage to internal organs and skeletal structures.
	Air exposure	Minimize air exposure by having release tools, fishing gear, and camera organized and readily accessible	The duration of air exposure is positively related to the length of time required for a fish to physiologically recover and to the likelihood of post-release mortality
Unhooking and Release	Deeply hooked fish	Depending upon the size of the hook and whether it is imbedded deeply, consider either keeping the fish if of legal size or cut the hook if it is small relative to the size of the fish.	Removing deeply embedded hooks increases handling time, air exposure, and tissue damage. Smaller hooks may deteriorate and pass through the fish, whereas large ones will not.
	Hook removal tools	Have accessible and use hook removal tools including pliers, bolt cutters, hemostats, forceps, etc.	Hook removal tools decrease the time required to remove a hook from the fish, and subsequently decreases the handling time and air exposure.
	Reviving released fish	Hold fish steady and upright or gently move in an 'S' or 'figure 8' pattern; do not move fish in a back-and-forth motion	For a fish to efficiently transfer oxygen from the water to the blood stream, water must pass over the gill surfaces in a front-to-back direction. Moving a fish back-and-forth in the water does not optimize oxygen uptake and can even be detrimental to recovery. Holding a fish steady allow the fish to naturally pulse the gills inducing flow over the gill surfaces.