

Old fishing hooks are severe hazards for sharks

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Study found sharks can retain stainless steel hooks for at least seven years.
Credit: University of Hawaii at Manoa

Startling data fresh off an eight-year tiger shark study in French Polynesia shows severe impacts the creatures of the sea face long after they are cut loose from fishing lines.

Many sharks are swimming around with stainless steel hooks lodged into their jaws. New research revealed sharks can retain those hooks for at least seven years and possibly an entire lifetime.

"That can have profound consequences for those animals. It can injure or even perhaps kill them because they're unable to feed properly after these interactions," said University of Hawai'i marine biology Associate Professor Carl Meyer. The notable shark expert is one of four researchers assigned to the project that launched in 2011.

Millions of sharks impacted by hook-and-line fisheries

According to the study, many [tiger sharks](#) are accidentally hooked by long line fisheries targeting tuna and swordfish. Data confirmed fishing boats hook millions of sharks each year, and about one-third bite through the line or are set free with hooks protruding from their jaws. Some sharks had up to seven deeply wedged hooks, according to researchers.

Meyer's four-member team studied 55 tiger sharks just outside Tahiti's northwest coast. And it was common for sharks to have more than one hook present.



Embedded hooks can restrict eating and may cause internal damage to organs or poisoning. Credit: University of Hawaii at Manoa

Meyer's team published their findings in *Fisheries Research* and are hopeful the study's data will result in a mandatory overhaul of fishing gear.

"If fisheries were to switch from using stainless hooks to carbon steel hooks then the impact on the sharks would be reduced simply because those hooks would fall out much more quickly," Meyer explained.

Researchers found sharks shed carbon steel, or corrodible hooks, within two-and-a-half years. Stainless steel hooks are no longer permitted for use by longline fisheries in Australia and various entities in the U.S.

According to the study, [hook](#) retention is a widespread issue that likely affects millions of shark species, including blue sharks, silky sharks, oceanic whitetip sharks, mako sharks and thresher sharks. Within a few weeks at the end of 2019, Meyer managed to remove four hooks from sharks off O‘ahu.

The study is geared toward heightening insights into shark conservation and management issues. The World Conservation Union designates tiger [sharks](#) as "near threatened" which means they are at risk of becoming endangered.

More information: Michel Bègue et al. Prevalence, persistence and impacts of residual fishing hooks on tiger sharks, *Fisheries Research* (2019). [DOI: 10.1016/j.fishres.2019.105462](https://doi.org/10.1016/j.fishres.2019.105462)

Provided by University of Hawaii at Manoa

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