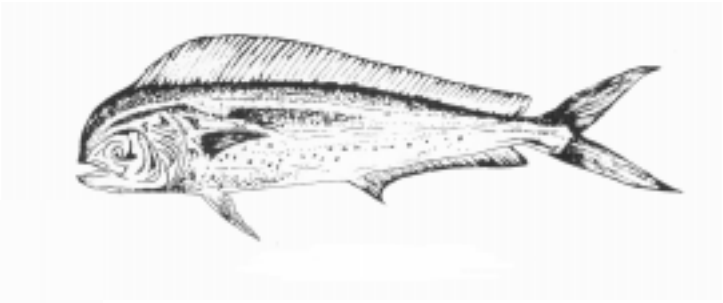

PREVENT HISTAMINE POISONING IN YOUR FISH!

By
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Histamine poisoning is among the top three seafood illnesses reported in the United States. Many instances of it, especially in recreational-caught fish, go unreported to health officials. Large amounts of histamine can be formed in these fish if they are poorly handled and temperature-abused.

The symptoms of histamine poisoning can include dizziness, headache, facial swelling and flushing, nausea, abdominal cramping and diarrhea, difficulty in swallowing. Although most victims recover within 24 hours especially with the help of antihistamines, some suffer for a longer period because individuals have different levels of sensitivities to histamine. Prevention is possible with proper handling.

Histamine is a chemical found in many scombroid fish – popular sport species with spiny fins. These species include such favorite offshore targets such as tunas, mahi mahi, marlin, amberjack and wahoo, as well as other sportfish such as bluefish and mackerels.

These fish naturally contain relatively large amounts of **histidine** (an amino acid) in their muscle. After the fish dies, the variety of live bacteria on the fish continue to grow, and in the process, can change **histidine** to **histamine**, especially at high, Gulf water temperatures.

The bacteria responsible for forming histamine may occur naturally in the living fish or may be added during handling. If the captured fish is left unattended, the water and air temperatures of the Gulf region provide excellent opportunities for the rapid growth of histamine-forming bacteria, increasing the risk of histamine poisoning. A popular sport-fishing species, tuna, has body temperatures above that of the surrounding water, and these temperatures are further elevated while fighting during capture. When a tuna is brought on board, its body temperature can be 10 or more degrees higher than the water temperature. This further increases the potential of histamine formation.

How can sport fishermen reduce the possibility of histamine poisoning from their catches? Chill the fish as rapidly as possible!

Rapidly chilling catch to prevent histamine formation has additional benefits, regardless of species. Spoilage and quality loss due to other bacteria and natural processes are also strongly affected by temperature. Rapid chilling maintains and lengthens the initial good quality of the meat and delays spoilage. Even if plans are to freeze the fish at the end of the day for future consumption, rapid chilling on board will prevent the formation of histamine and retain good quality levels until it is properly packaged and frozen.

Simple Techniques to Chill Fish and Prevent the Formation of Histamine

- Before leaving the dock, pack cooler(s); large enough for the fish you hope to catch, full with bags of ice.

- On the water, before casting, prepare the coolers by opening a couple bags of ice and forming a layer of ice on each cooler bottom. Return the other ice bags, unopened to the cooler for storage.

- As soon as the fish is brought on board, stun it by clubbing it with a blunt instrument, aiming for the soft part of the head between the eyes.

- Place the fish in the ice chest on the layer of ice. Open additional bags of ice and cover and completely surround the fish, using two pounds of ice for each pound of fish.

  Two pounds of ice for every pound of fish is recommended to rapidly chill the fish. For commercially caught tuna, the US Food and Drug Administration (FDA) recommends that large, whole tuna be chilled to a 50°F internal temperature within 6 hours of capture, and then further chilled down to 40° F within 24 hours.

- Bleeding and gutting the fish can assist rapid chilling. Gutting will also remove a source of bacteria, if done carefully. The bacteria must be contained. When gutting, ***do NOT cut through the belly wall*** into the meat. After gutting, ***pack ice firmly into the belly cavity*** before covering the fish with ice.

References

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