Parasite Destruction for Food Service Establishments

All living organisms, including fish, can have parasites. Parasites are killed during the cooking process and therefore do not present a health concern in thoroughly cooked fish.

Parasites become a concern when consumers eat raw, undercooked or lightly preserved fish such as sashimi, sushi or ceviche. Freezing, as required under the FDA Food Code, kills any parasites that may be present.

Parasite Destruction

Parasite destruction is required for fish that are served or sold in ready-to-eat form, raw, raw-marinated, partially cooked or marinated-partially cooked.

Fish is defined by the Food and Drug Administration as:

- Fresh or saltwater finfish, crustaceans and other forms of aquatic life (including alligator, frog, aquatic turtle, jellyfish, sea cucumber, and sea urchin and the roe of such animals) other than birds or mammals, and all mollusks, if such animal life is intended for human consumption.
- Fish includes an edible human food product derived in whole or in part from fish, including fish that have been processed in any manner such as:
    - Fish sauce, oyster sauce, whitefish spread, crab salad

Exemptions

The following fish do not require parasite destruction:

- Molluscan shellfish such as:
    - Oysters, clams, or mussels
- A scallop product consisting only of the shucked adductor muscle;
- Tuna of the species Thunnus alalunga, Thunnus albacares (Yellowfin tuna), Thunnus atlanticus, Thunnus maccoyii (Bluefin tuna, Southern), Thunnus obesus (Bigeye tuna), or Thunnus thynnus (Bluefin tuna, Northern)
- Aqua cultured fish, such as salmon, that:
    - If raised in open water, are raised in net-pens, or
    - Are raised in land-based operations such as ponds or tanks, and
    - Are fed formulated feed, such as pellets, that contains no live parasites infective to the aqua cultured fish.
- Fish eggs that have been removed from the skein and rinsed.

Requirements for Parasite Destruction

Except for fish listed above, fish that are served raw or partially cooked must be subjected to parasite destruction by freezing. There are three acceptable time/temperature methods to accomplish parasite destruction. All methods require that documentation or records be kept on site and available for review during the food establishment inspection.

The three acceptable time/temperature methods are:

- Frozen and stored at a temperature of -4°F or below for a minimum of 168 hours (7 days) in a freezer; or
- Frozen at -31°F or below until solid and stored at -31°F or below for a minimum of 15 hours; or
- Frozen at -31°F or below until solid and stored at -4°F or below for a minimum of 24 hours.

Record Keeping

Fish that are treated for parasites (frozen) by the food establishment:

- Records documenting the freezing temperature and time to which the fish were subjected must be maintained at the food establishment for 90 calendar days beyond the time of service or sale of the fish.

Fish that are frozen by a supplier:

- A written agreement or statement from the supplier stipulating that the fish supplied are frozen to a temperature and for a time as specified may substitute for the records.
- Letter must be dated. Letter should be kept onsite and updated by the supplier on a yearly basis.
- Names of the fish provided by the company
- Type of destruction treatment method performed for every fish type

Fish that are farm raised (not required to be treated for parasites):

A written agreement or statement from the supplier or aqua culturist shall be obtained by the person in charge and retained at the food establishment for 90 calendar days beyond the time of service or sale of the fish.

The written agreement or statement must include the following information:

- The fish if raised in open water, are raised in net-pens, OR
- The fish are raised in land-based operations such as ponds or tanks, AND
- Are fed formulated feed, such as pellets, that contains no live parasites infective to the aquacultured fish.

Ceviche

Traditionally ceviche consists of raw fish or shellfish marinated in an acidic food or citrus juice. The acid from the food or juice alters the structure, firming the flesh of the raw seafood and turns it opaque, giving it the appearance and texture of being cooked. The seafood remains raw, and the risks associated remain. The above guidelines must be followed for all raw fish utilized in ceviche. Learn more.

The FDA's Fish and Fisheries Products Hazards and Controls Guidance document contains tables with types of fish (vertebrate and invertebrate) and their associated hazards in chapter 3.

The FDA's Fish and Fisheries Products Hazards and Controls Guidance document contains detailed information regarding parasite destruction in chapter 5.