

Ciguatera Poisoning

What is ciguatera poisoning?

Ciguatera poisoning is a form of food poisoning, and the most common food poisoning event related to finfish consumption in Australia. It is caused by eating warm water finfish that carry ciguatera poison (toxin). These are generally fish that spend some or most of their lifecycle on coral reefs however, not all tropical reefs are affected and only some fish are susceptible.

Ciguatera poisoning is caused by a naturally occurring marine toxin that accumulates in the food chain. It is passed from small plant-eating fish that feed on affected algae who are then eaten by larger, predatory fish, like Spanish Mackerel, which are then consumed by humans.

These toxins are highly potent and are effective in very low quantities. Recent evidence suggests that consuming the head or viscera of toxic fish - the soft internal organs such as the intestines, roe or liver, may increase exposure as well as the severity of the symptoms.



Figure 1 In Australia, Spanish Mackerel has caused the highest number of cases of ciguatera poisoning

What are the symptoms?

Symptoms usually start 1 to 24 hours after eating affected fish. The time of onset of illness and the range of symptoms experienced will vary depending on how much fish is eaten, which parts of the fish are eaten, how much toxin is in the fish and the individual susceptibility of the consumer. Symptoms can last for days, weeks, months or (in very rare cases) years following a single ciguatera poisoning incident.

Symptoms include:

- sensation of hot-cold temperature reversal. This can include a burning sensation or skin pain on contact with cold water or a stinging sensation when drinking water
- tingling and numbness in fingers, toes, around lips, tongue, mouth and throat
- joint and muscle pains with muscular weakness
- nausea, vomiting, diarrhoea and/or abdominal cramps
- headache, fatigue and fainting
- extreme itchiness, often worsened by drinking alcohol
- dizziness, low blood pressure, cardiac abnormalities
- difficulty breathing in severe cases

Managing the risk

A number of strategies are in place to manage ciguatera fish poisoning. Sales of high risk fish are limited, and risk reduction programs operated by regulators and industry are in place.

How can you manage the risk of ciguatera poisoning?

We know that ciguatera toxin does not affect the appearance, odour or taste of fish and that processes like cooking or freezing will not destroy the toxin and there is no method for removing it from the fish. There are some simple rules that can be followed to reduce the risk of exposure to ciguatoxins:

- avoid cooking and eating the head, roe, liver or other viscera of warm water ocean fish as Ciguatera toxin is concentrated in these parts and may increase exposure
 - vary the type of warm water fish eaten
 - avoid eating large warm water fish such as Spanish Mackerel (in accordance with NSW industry experts) as ciguatera fish poisoning occurs more frequently when larger fish are eaten. Cases of poisoning from Spanish Mackerel caught in NSW waters have generally been linked to fish over 10kgs.
 - if ciguatera-like symptoms develop when eating a warm water ocean fish, do not eat further portions of that fish and see your doctor
 - do not catch fish from known or high-risk ciguatera areas
 - Ciguatera is more common in the warmer northern waters of Queensland and parts of the Northern Territory
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Treatment

Promptly seek medical attention from a hospital or GP at the onset of symptoms. If you are concerned about ciguatera poisoning contact your Local Public Health Unit on 1300 066 055.

High-risk areas and species size limits

It is recommended to be aware of ciguatera high-risk areas and species size limits. The Sydney Fish Market's Schedule lists fish to avoid and high-risk areas. You can access this document, Seafood Handling Guidelines at sydneyfishmarket.com.au/Portals/0/adam/Content/41UictluJECV0p4vxMVS4Q/ButtonLink/Seafood%20Handling%20Guidelines.pdf (PDF, 3623KB)

More information

- Visit foodauthority.nsw.gov.au
 - Email the Food Authority helpline at food.contact@dpi.nsw.gov.au
 - Phone the Food Authority helpline on 1300 552 406
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