

# Ciguatera Fish Poisoning

## How does Ciguatera fish poisoning occur?

Illness occurs after eating contaminated seafood, particularly tropical reef fish such as grouper. It is more prevalent in places where reef fish is caught, such as the Caribbean, southern Florida, Hawaii, the South Pacific, and Australia. There is no evidence of person-to-person transmission. Fifty thousand cases of ciguatera fish poisoning are estimated to occur each year worldwide. Ciguatoxic fish are found on a sporadic basis and not all fish from a given species or location will be toxic.

## What is Ciguatera Fish Poisoning?

Ciguatera fish poisoning (CFP) is a common foodborne illness caused by eating subtropical and tropical fish that contain toxins produced by a marine microalgae called Gambierdiscus toxicus. The Gambierdiscus toxicus algae are found primarily in subtropical and tropical areas where it lives on dead corals. Ciguatera-toxic fish accumulate these toxins naturally through their diet. Ciguatera-toxic fish accumulated these toxins by consuming the algae or by feeding on other fish that have consumed the algae.

## How soon after exposure does the infection occur?

Illness may occur within 1 to 24 hours after exposure. Gastrointestinal symptoms appear first, accompanied or followed by neurological symptoms up to 2 days later.

## What are the symptoms of Ciguatera fish poisoning?

Mild intoxication may involve only gastro-intestinal upset (nausea, vomiting, diarrhoea, gut pains) or headache, fatigue and fainting which resolves in a day or two. More severe poisoning may cause one or more of the following neurological signs and symptoms:

- 1 Itching, which may be intense and unrelenting for days or weeks
- 2 Alterations in sensory perception, where contact with cold surfaces or taking cold drinks may provoke burning or electric-shock-like sensations
- 3 Tingling or painful sensations in hands, feet or genitals
- 4 Dizziness, low blood pressure, cardiac abnormalities
- 5 Joint and/or muscle pain, lassitude
- 6 Symptoms can last for days, weeks, months or (rarely) years following a single ciguatera poisoning incident.

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## How is the Ciguatera fish poisoning diagnosed?

Ciguatera fish poisoning is diagnosed by stool or food sample cultures. Detection for ciguatera, however, requires specialized analytical methods and/or particular bioassays.

## What is the treatment for Ciguatera fish poisoning?

Unfortunately, there is no single specific remedy for the treatment of ciguatera fish poisoning.

The most successful management of the disease has been accomplished by supportive and symptomatic treatment such as induced vomiting.

## How can Ciguatera fish poisoning be prevented?

Ciguatoxic fish cannot be detected by appearance, taste or smell. Raw and cooked whole fish, fillets or parts have no signs of spoilage, discoloration or deterioration. Avoid or limit the consumption of large reef fish weighing over 6 lbs, especially the highly susceptible species like barracuda, grouper, jack, moray eel, red snapper, sea bass, and sturgeon.

## Avoid consumption of large predatory fish

Ciguatera poisoning is amplified through the food-chain, becoming most concentrated in predatory fish. The Ciguatoxin is very heat-stable. Normal cooking (boiling, steaming, frying) will not reduce or eliminate the toxin.

## What to do if you suspect Ciguatera fish poisoning On Board?

- Step 1.** Save suspected food in an airtight container and hold in cold storage, if voyage to continue then hold in freezer
- Step 2.** Report suspected food borne illness to vessel management, Marine authority & Garrets International Ltd
- Step 3.** Identify and isolate same batch of suspected fish, mark up with permanent pen "do not use by order of Garrets International Ltd"
- Step 4.** Clean and sanitise all cooking equipment used to store, prepare, cook & serve the suspected food borne illness food (if cook affected then another unaffected crew member can carry out this task)
- Step 5.** Isolate affected crew to cabins ensuring they continue to hydrate with water or citrus, sugar and water dilution
- Step 6.** Collect stool samples from all the affected crew and store in a non-food refrigerator for future testing by a medical lab
- Step 7.** Vessel Officer to check affected crew every 15 - 30 mins until loose stools and nausea stop
- Step 8.** Continue to hydrate crew until they return to a normal health state
- Step 9.** Avoid consumption of fish or shell fish for 8-12 weeks as this can cause a reoccurrence of symptoms
- Step 10.** Garrets will provide additional advice and guidance on batch disposal/credit, testing (if required) & food safety.